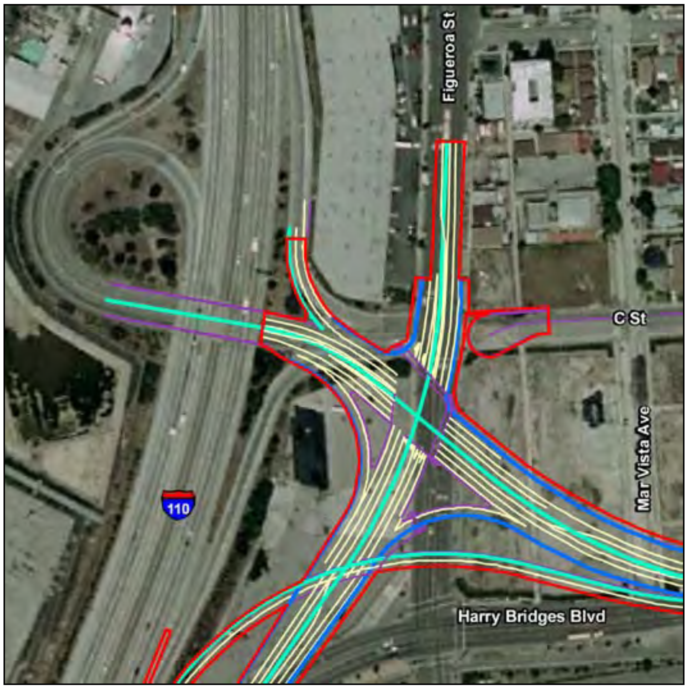
Interstate 110/C Street Interchange Project

City of Los Angeles, Los Angeles County, California
07-LA-110-PM 2.5/3.0
EA 264800

Initial Study/Environmental Assessment



Prepared by the
California Department of Transportation
and the
Los Angeles Harbor Department

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 USC 327.

Caltrans

September 2011

THE PORT OF LOS ANGELES

Interstate 110/C Street Interchange Project (07-LA-110-PM 2.5/3.0)
in the Wilmington community of City of Los Angeles, California

INITIAL STUDY/
ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C)

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 USC 327

THE STATE OF CALIFORNIA
Department of Transportation

and

Los Angeles Harbor Department

10-6-2011
Date of Approval

Christopher Cannon
Director,
Environmental Management Division
City of Los Angeles Harbor Department

10-6-2011
Date of Approval

for Ronald Kosinski
Deputy District Director
California Department of Transportation
District 7, Los Angeles

PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) in cooperation with Los Angeles Harbor Department proposes to combine the two existing intersections at (1) C Street and Figueroa Street and (2) John S. Gibson Boulevard, Harry Bridges Boulevard, and Figueroa Street with one new intersection that would realign Harry Bridges Boulevard and John S. Gibson Boulevard, to the C Street interchange. The proposed project would also remove the existing northbound off-ramp and provide a new, direct, off-ramp from northbound I-110 to eastbound Harry Bridges Boulevard. This would involve the widening of the existing Union Oil undercrossing and the construction of a new separation structure over the realigned John S. Gibson Boulevard. Further improvements at the ramps would include a dedicated right-turn lane from the I-110 southbound off-ramp to southbound John S. Gibson Boulevard and a conventional signalized right turn from northbound John S. Gibson Boulevard to eastbound Harry Bridges Boulevard. The new intersection at Figueroa Street, Harry Bridges Boulevard, and John S. Gibson Boulevard would be widened to accommodate dual left turn pockets from westbound Harry Bridges Boulevard to southbound John S. Gibson Boulevard. The planned improvements will require no additional right of way acquisition. All land required for improvements are owned by Caltrans and Los Angeles Harbor Department.

Determination

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a MND for this project. This does not mean that Caltrans' decision regarding the project is final. This MND is subject to modification based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

- The proposed project would have no effect on farms and timberlands, sole source aquifers, wild and scenic rivers, encroachment on state lands, relocations, and mineral resources.
- The proposed project would have no significant effect on growth, parks and recreation, environmental justice, hydrology and floodplains, geology/soils/seismicity/topography, hydrology and floodplains, and water quality and stormwater runoff.
- With mitigation/minimization measures incorporated, the proposed project would not have significantly adverse effects on land use and consistency, community character and cohesion, utilities and emergency services, traffic and circulation, visual/aesthetics, cultural resources, paleontological resources, hazardous materials, air quality, noise, and biological resources.

Ronald Kosinski
District Director, District 7
Division of Environmental Planning
California Department of Transportation

Date

[placeholder for FONSI—to be added for final draft ED]

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Technical Studies

[The following studies are printed under separate cover and are available at Caltrans' District 7 offices during normal business hours.]

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation, District 7 (Caltrans), in cooperation with the Los Angeles Harbor Department (LAHD), proposes to improve the existing Interstate 110 (I-110)/C Street interchange. The proposed project would include a northbound off-ramp for direct access to Harry Bridges Boulevard, modification of the northbound on-ramp from C Street, realignment of Harry Bridges Boulevard, and combining the I-110 ramp terminal/C Street/Figueroa Street intersection with the John S. Gibson Boulevard/Harry Bridges Boulevard intersection. The proposed project is within the City of Los Angeles's (City's) Wilmington community area and is predominantly surrounded by port-related facilities (see Figure 1-1 and Figure 1-2 for the project location and vicinity maps and Figure 1-3 for a map of the proposed project improvements). The project area falls within the Coastal Zone.

Within the harbor area, I-110, also known as the Harbor Freeway, is an access-controlled,[1] grade-separated freeway that is used for commuter travel, goods movement, and interregional travel. This route is an important connection between the port and the rest of the Los Angeles region.

The proposed project is listed in the amendment to the final 2008 Regional Transportation Improvement Program (RTIP) as Project ID LA0F030 and is consistent with the description in the RTIP. As of 2008, the cost of the proposed project was estimated to be $24.8 million. The current estimated cost for the build alternative is $37.0 million, which includes $12.7 million for right-of-way acquisition and utility relocation and $24.3 million for construction. Funding from the Trade Corridor Improvement Fund (TCIF) has been allocated for the proposed project in the amount of $8.3 million, and Metro Prop C funds have been allocated in the amount of $6.6 million. LAHD will fund the remaining $22.1 million from the Infrastructure Cargo Fee and port revenue funds.

Caltrans is the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) lead agency for the initial study/environmental assessment (IS/EA) that has been prepared for this proposed project.

1.1.1 Existing Facility

The I-110/C Street interchange consists of a trumpet interchange.[2] On the east side, the interchange provides on- and off- ramps for northbound traffic; in the northwest quadrant, a loop on-ramp is nestled within a hook off-ramp on the west side for southbound traffic. The interchange provides ingress and egress to/from I-110 at the Figueroa Street/C Street intersection.

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[1] With an access-controlled freeway, the owners of abutting lands have no right or easement of access to or from their abutting lands; such owners have only limited or restricted right or easement of access.
[2] Trumpet interchanges are named as such because of their resemblance to trumpets. They have at least one loop ramp that connects traffic (either entering or leaving the terminating roadway) to the far lanes of the continuous highway. The bell of a trumpet can be seen where the terminating roadway begins to merge with the continuous roadway. The resemblance to the tubing is seen along the connecting loop ramps.

Figure 1-1: Project Location Map

Source: ESRI Streetmap (2008)

Figure 1-2: Project Vicinity Map

Figure 1-3: Proposed Project

Access to C Street (a local road) from the ramps is currently blocked by a temporary raised median. The existing southbound and northbound off-ramps merge just east of the interchange, resulting in a short weaving distance. This tends to reduce the operational efficiency of the interchange.

Port traffic traveling southbound on I-110 to the TraPac container terminal via the C Street off-ramp is required to make an immediate right turn onto southbound Figueroa Street before entering the terminal gate at the intersection of Figueroa Street, Harry Bridges Boulevard, and John S. Gibson Boulevard.

The following is a brief description of the streets and highways that intersect the project site:

- *Interstate 110* is a north-south highway that extends from the port area to downtown Los Angeles. It has six lanes in the vicinity of the harbor and widens to eight lanes in the north.
- *John S. Gibson Boulevard* is a four-lane north-south street that runs adjacent to I-110 along the western boundary of LAHD's West Basin project site. It provides direct access to the Yang Ming container terminal at Berths 121–131 and Phase I of the China Shipping Terminal at Berths 97–109. John S. Gibson Boulevard becomes Pacific Avenue as the street continues south into San Pedro. John S. Gibson Boulevard is classified as a Class II Major Highway in the City of Los Angeles General Plan, with a right-of-way of 100 feet. John S. Gibson Boulevard also provides Class II bike lanes. The existing right-of-way of the street in the project area is about 90 feet**.**
- *Harry Bridges Boulevard* is a four-lane east-west street that runs along the north side of LAHD's West Basin. It provides direct access to the container terminal at Berths 136–139 as well as Berths 142–147 via Neptune Avenue, which extends southward from Harry Bridges Boulevard. Harry S. Bridges Boulevard is classified as a Class II Major Highway by the City of Los Angeles General Plan, with a right-of-way of 100 feet. The existing right-of-way of the street in the project area varies from 90 to 100 feet**.**
- *Figueroa Street* is a four-lane street that extends northward from the harbor area into the community of Wilmington and the City of Carson along the east side of I-110. The entrance to the TraPac Container Terminal is at the intersection of Figueroa Street and Harry Bridges Boulevard. Figueroa Street is classified as a Class II Major Highway by the City of Los Angeles General Plan, with a right-of-way of 100 feet. Figueroa Street also provides Class III bike lanes. The existing right-of-way of the street in the project area is about 85 feet.

Currently, three terminal entrance and exit gates along the West Basin affect the operation of the roadway system in the immediate area. The first gate is located at the intersection of Harry Bridges Boulevard, Figueroa Street, and John S. Gibson Boulevard. The second gate is located along John S. Gibson Boulevard, which is opposite the I-110 northbound ramps. The third gate is located along Front Street, which is opposite Knoll Drive.

Retaining walls exist between I-110 and John S. Gibson Boulevard south of C Street. There is a Union Oil undercrossing (Bridge No. 53-1035) that provides access between John S. Gibson Boulevard and the Union Oil facility located on the west side of I-110. The undercrossing provides a 25-foot-wide roadway with access controlled by a chain link gate.

1.2 Purpose and Need

1.2.1 Project Purpose

The purpose of the proposed project is to

- improve traffic operations at the C Street/Figueroa Street intersection and reduce vehicular delays, and
- meet Caltrans' goal of maximizing the performance and accessibility of transportation systems.

1.2.2 Project Need

The proposed project is needed to improve the existing intersection level of service (LOS), a non-standard weaving distance, and traffic circulation within the area. The need for this project is based on an assessment of transportation demand and current and projected traffic model volumes. The results of this assessment are discussed below.

1.2.2.1 Capacity and Transportation Demand

Roadway capacity is determined by the number of vehicles that can reasonably pass over a given section of roadway in a given period of time. The *Highway Capacity Manual*, prepared by the National Transportation Research Board, identifies travel speed, freedom to maneuver, and proximity to other vehicles as important factors in determining LOS for a roadway. As shown in Table 1-1, LOS conditions are designated as "A," indicating the best free-flow condition, through "F," indicating worst-case congested conditions. Daily traffic volumes are used to estimate the extent to which peak-hour traffic volumes equal or exceed the maximum desirable capacity of a roadway. The LOS for freeways is shown in Figure 1-4.

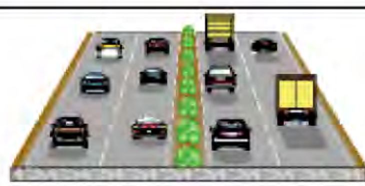
Table 1-1: Traffic Level of Service Descriptions

LOS	Description	Volume-to-Capacity Ratio Typical Speed
A	Indicates primarily free-flow operations and the ability to maneuver unimpeded.	0.00–0.33 5-0-plus mph
B	Indicates stable flow, with few restrictions on operating speed or maneuverability.	0.34–0.50 48–49 mph
C	Indicates stable flow but higher volumes and more restrictions on speed and lane changing.	0.51–0.65 44–47 mph
D	Indicates that traffic is approaching an unstable flow, with little freedom to maneuver, but conditions are tolerable for short periods.	0.66–0.80 40–43 mph
E	Indicates unstable flow, lower operating speeds than LOS D speeds, and some momentary stoppages.	0.81–1.00 30–39 mph
F	Indicates a forced flow that is operating at low speeds; the highway acts as a storage area, and there are many stoppages.	Greater than 1.00 Less than 30 mph

Source: *Highway Capacity Manual*, Special Report 209, Transportation Research Board, 1995.

Figure 1-4: Levels of Service for Freeways

LEVELS OF SERVICE
for Freeways

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		70	Highest quality of service. Traffic flows freely with little or no restrictions on speed or maneuverability. **No delays**
B		70	Traffic is stable and flows freely. The ability to maneuver in traffic is only slightly restricted. **No delays**
C		67	Few restrictions on speed. Freedom to maneuver is restricted. Drivers must be more careful making lane changes. **Minimal delays**
D		62	Speeds decline slightly and density increases. Freedom to maneuver is noticeably limited. **Minimal delays**
E		53	Vehicles are closely spaced, with little room to maneuver. Driver comfort is poor. **Significant delays**
F		<53	Very congested traffic with traffic jams, especially in areas where vehicles have to merge. **Considerable delays**

The *Traffic Operations Analysis Report* was prepared for the proposed project in 2009. Traffic volume data for the I-110/C Street interchange were collected in 2009 by Iteris. Table 1-2 presents the existing (2009) and future no-build peak-hour traffic volumes for 2014 and 2035 at the I-110/C Street interchange. The increased traffic on the ramps is attributable to expected growth at port facilities and an increase in local traffic.

Table 1-2: Existing (2009) and Future No-Build (2014 and 2035) Peak-Hour Traffic at Project Site

	Existing (2009)		**Future No-Build (2014)**		**Future No-Build (2035)**	
Roadway Segment	**AM Peak-Hour Volume**	**PM Peak-Hour Volume**	**AM Peak-Hour Volume**	**PM Peak-Hour Volume**	**AM Peak-Hour Volume**	**PM Peak-Hour Volume**
Northbound (NB) I-110 south of C Street off-ramp	3,553	3,337	4,138	3,771	5,131	4,697
NB I-110 off-ramp to C Street	202	255	303	341	350	379
NB I-110 between C Street on- and off-ramps	3,351	3,081	3,835	3,430	4,781	4,318
NB I-110 on-ramp from C Street	424	657	454	732	485	617
NB I-110 between C Street on-ramp and Anaheim Street off-ramp	3,775	3,739	4,290	4,162	5,266	4,935

Source: *Traffic Operations Analysis Report*, Iteris, 2009a.

Roadway Segments and Intersection Operations

The results of the peak-hour LOS analysis for 2009, 2014, and 2035 are summarized in Table 1-3 for intersections and freeway segments. The intersection analysis shows that, under forecast 2014 and 2035 traffic conditions, one intersection is projected to operate at an unacceptable LOS of F in the AM and PM peak hours without the proposed improvements (see Table 1-3). This condition would improve to LOS B and LOS C in the AM and PM peak hours, respectively, with the proposed project.

1.2.2.2 Roadway Deficiencies

Various non-standard features exist that contribute to existing roadway deficiencies. The existing northbound off-ramp has one lane that is approximately 750 feet in length. The standard calls for two lanes that exceed 1,000 feet. The weaving distance between the existing northbound on-ramp from C Street to the Anaheim Street off-ramp is 730 feet. The standard weaving distance is 1,600 feet. The spacing between the existing C Street interchange and the Anaheim Street interchange to the north is approximately 0.5 mile (see Figure 1-2). The standard spacing is 1.0 mile. The existing spacing between the C Street interchange and the I-110/SR-47 interchange to the south is 1.8 miles. The standard spacing is 2.0 miles.

Table 1-3: Peak-Hour Level of Service at Intersections and Segments for 2009 Traffic Volumes and No-Build Traffic Volumes for 2014 and 2035 (Highway Capacity Software [HCS])

Roadway Segment/Intersection	Existing (2009)		Future No-Build (2014)		Future No-Build (2035)	
	AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS	AM Peak-Hour LOS	PM Peak-Hour LOS
Segments						
NB I-110 south of C Street off-ramp	C	B	C	B	C	C
NB I-110 off-ramp to C Street	C	B	C	C	C	C
NB I-110 between C Street on- and off-ramps	B	A	C	B	C	C
NB I-110 on-ramp from C Street[1]	—	—	—	—	—	—
NB I-110 between C Street on-ramp and Anaheim Street off-ramp	B	B	C	C	C	C
Intersections						
Figueroa Street and I-110 ramps/C Street	B	C	F	F	F	F
Figueroa Street /John S. Gibson Blvd/Harry Bridges Blvd	A	A	B	B	C	C

[1] LOS is covered under the weaving segment.

Source: *Traffic Operations Analysis Report*, Iteris, 2009a.

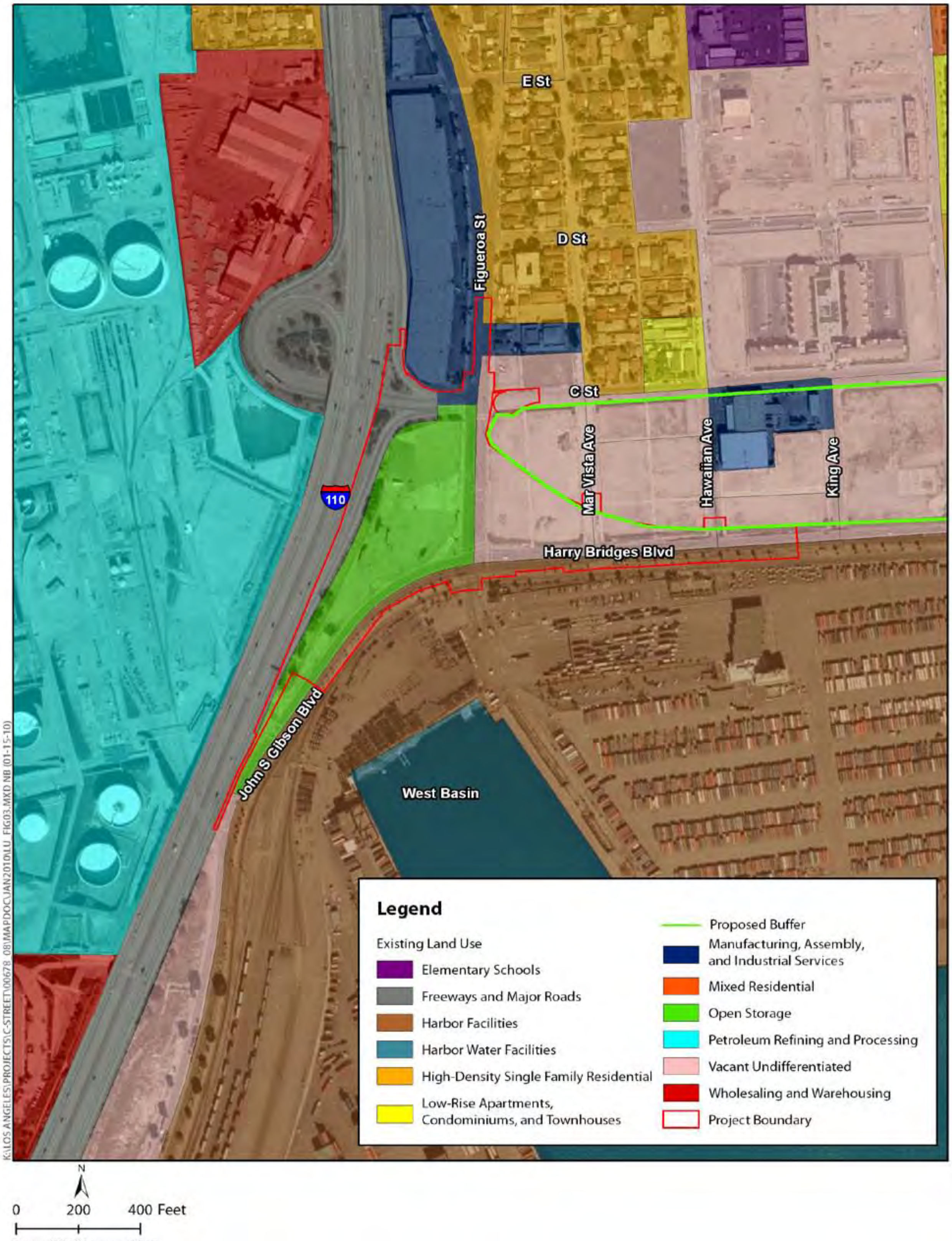
The existing northbound and southbound off-ramps merge at a point just east of the C Street undercrossing structure. This merge distance is very short and tends to reduce operational efficiency of the C Street/Figueroa Street and I-110 intersection. Correcting this short merge distance or eliminating it altogether would improve future LOS and enhance the safety of the interchange.

1.2.2.3 Social Demands or Economic Development

Land Use Trends

The proposed project is located in an area that is both industrial and residential. Port facilities are located directly south of the proposed project, and industrial warehouse-type facilities are located to the east. The area near the D Street and Figueroa Street intersection is residential. The area between C Street and Harry Bridges Boulevard east of Figueroa Street is vacant land that is owned by the City of Los Angeles for public use. The City has constructed a green-space buffer between port facilities and the residential community in Wilmington, known as the Harry Bridges Boulevard Buffer Project and the Wilmington Waterfront Project. Figure 1-5 shows the existing land uses and the recently constructed buffer.

Figure 1-5: Existing Land Uses



There are a few adjacent transportation projects that would occur in the vicinity of the C Street interchange. The SR-47/I-110/John S. Gibson interchange project (EA 26060K) is located less than 1 mile south of the proposed project. It is currently in the project initiation phase. The PSR for the SR-47/I-110/John S. Gibson interchange project is being developed concurrently with the proposed project. Two LAHD projects, the Harry Bridges Boulevard widening project (currently under construction) and the Fries Avenue grade separation project, are planned in the project vicinity. The Harry Bridges Boulevard widening project will match the widening and realignment modifications made under the proposed project. The Fries Avenue project is associated with relocation of the port's entrance and exit gates.

Social Demands

In April 2006, LAHD launched a series of transportation-related community workshops for residents of the San Pedro and Wilmington areas in which conceptual improvements were developed. The intent was to maintain an open dialogue with residents by providing updates on the proposed project and obtaining public comments on potential future improvements. The Wilmington community voiced a strong desire to separate truck traffic from its residential areas. Currently, a temporary fix (i.e., a raised median) is provided to block port-related truck traffic from accessing C Street from the ramps. Also, the community would prefer to have more separation between port facilities and residential areas.

Modal Interrelationships and System Linkages

Interstate 110 is a major north-south freeway that connects San Pedro, Wilmington, and the port with the rest of the City of Los Angeles. In addition, I-110 is an important truck route, as evidenced by the large number of trucks that travel to and from port terminals. Therefore, it is an integral and essential part of the interstate system within Los Angeles County.

LAHD anticipates an increase in truck traffic at port terminals within the next 25 years in addition to increases in non-commercial traffic due to expected local growth. As a result, freeway interchanges, local roads, and highways near port terminals are expected to reach capacity during peak periods.

LAHD recognizes that a lack of peak-period capacity is a serious problem and has therefore initiated a number of studies to consider improvements to surrounding facilities. Four locations have been identified for conceptual development: (1) Harbor Boulevard and I-110, (2) the I-110 southbound on-ramp at Mira Flores, (3) the John S. Gibson Boulevard ramps, and (4) the I-110/SR-47 connector. The proposed project improvements described in this IS/EA would be consistent with all future projects.

John S. Gibson Boulevard is designated to provide Class II bike lanes, and Figueroa Street is designated to provide Class III bike lanes. The proposed improvements would accommodate the existing bike lane classifications and include 8-foot shoulders. There are existing bike lanes on northbound John S. Gibson Boulevard and Figueroa Street.

1.2.2.4 Independent Utility and Logical Termini

The proposed project would reduce congestion in the project area without creating a new chokepoint outside the project limits. The project would not require future construction to use the project's design capabilities fully and meet the purpose and need. The proposed project has been designed 1) to connect logical termini and be of sufficient length to address environmental matters on a broad scope, 2) to have independent utility or independent significance, and 3) not to restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

1.3 Project Description

This section describes the proposed project and the design alternatives that were developed by a multi-disciplinary team to achieve the project's purpose and need while avoiding or minimizing environmental impacts. For the proposed project, a Build Alternative and a No-Build Alternative are being considered. The Build Alternative is described in the final 2008 RTIP as Project ID LA0F030.

The proposed project is located at the Port of Los Angeles, which is within the boundaries of the City of Los Angeles. The project limits for the interchange improvement project are along I-110, from 0.23 mile south of C Street to 0.20 mile north of C Street (LA-110 PM 2.5/3.0) (see Figure 1-2). The purpose of the proposed project is to improve traffic flow, enhance accessibility, and develop a design that is compatible with existing residential, industrial, and port uses.

1.4 Alternatives

1.4.1 No-Build Alternative

The No-Build Alternative provides a baseline for comparing potential impacts with the other alternatives. However, this alternative would not be consistent with the final 2008 RTIP, Project ID LA0F030.

Traffic congestion is expected to increase as cargo operations at port terminals continue to expand. As seen earlier in Table 1-3, under forecast 2035 traffic conditions, some traffic movements will be at an unacceptable LOS of F in the AM and PM peak hours without the proposed improvements. The existing intersection of Figueroa Street and C Street/I-110 ramps will continue to operate at LOS F. Without the proposed modifications to the C Street interchange, trucks will continue to use nearby residential streets in the Wilmington community. The No-Build Alternative will not improve the existing ramps and current intersection conditions and, therefore, will not meet the purpose and need of the proposed project.

1.4.2 Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

The Build Alternative would combine the two existing intersections at Figueroa Street/C Street and Figueroa Street/John S. Gibson Boulevard/Harry Bridges Boulevard with one new intersection that would realign Harry Bridges Boulevard and John S. Gibson Boulevard to the

C Street interchange. As a result, access to Figueroa Street from C Street would be closed; an offset cul-de-sac at the existing intersection would eliminate any right-of-way impacts on surrounding commercial or residential properties.

The Build Alternative would remove the existing off-ramp from northbound I-110 and provide a direct off-ramp to eastbound Harry Bridges Boulevard. This would involve widening the existing Union Oil undercrossing and construction of a new separation structure over the realigned John S. Gibson Boulevard. Further improvements at the ramps would include a dedicated right-turn lane from the I-110 southbound off-ramp to southbound John S. Gibson Boulevard and a conventional signalized right turn from northbound John S. Gibson Boulevard to eastbound Harry Bridges Boulevard. The new intersection at Figueroa Street/Harry Bridges Boulevard/John S. Gibson Boulevard would be widened to accommodate dual left-turn pockets from westbound Harry Bridges Boulevard to southbound John S. Gibson Boulevard. The planned improvements would require no additional right-of-way acquisition of private property. All land required for the proposed improvements is owned by Caltrans and LAHD. Typical cross sections of the Build Alternative are provided in Appendix D. Table 1-2, which is based on the 2009 *Traffic Operations Analysis Report*, provides data regarding anticipated peak-hour traffic under existing conditions (2009) as well as in the opening year (2014) and the design year (2035). Table 1-3 provides data regarding peak-hour LOS under existing conditions (2009) as well as projected peak-hour LOS in the opening year (2014) and the design year (2035).

The proposed safety improvements associated with the Build Alternative would eliminate the short weaving condition between Figueroa Street and the northbound and southbound off-ramps. The proposed interchange modification would also eliminate the undesirable weaving condition on C Street at the ramp terminals and relocate the northbound off-ramp to access Harry Bridges Boulevard directly.

The proposed project also includes curb, gutter, and sidewalk improvements on Mar Vista Avenue and Hawaiian Avenue, just north of Harry Bridges Boulevard. Concrete sidewalks are proposed along the local roadways to provide a clear and unobstructed path for pedestrian travel within the project limits. Curb ramps would be constructed at intersection and street crossings. Pedestrian signals and cross walk pavement delineation would also be provided.

Highway planting adjacent to the existing Northbound I-110 off-ramp at C Street would be removed as part of the proposed project. The existing ramp would be removed and the embankment slope would be re-graded. The project would provide highway planting of embankment slopes within the state right of way. Landscaping will be provided along the local roadways in accordance with local jurisdiction requirements.

The proposed project would also seismically retrofit the existing Union Oil undercrossing (Bridge No. 53-1033). In addition, seismic retrofitting of the existing anchor slab section of retaining wall number 318 based on current design criteria would also be considered.

Non-Standard Design Features of the Build Alternative

A Mandatory Design Exception Fact Sheet for non-standard design features was prepared for the Build Alternative in conjunction with the PSR; it was approved on January 22, 2007. An Advisory Fact Sheet was prepared for the Build Alternative in conjunction with the PSR and was approved on January 22, 2007. The fact sheets were sent to the Federal Highway Administration (FHWA) for review in January 2007. Design standards are reported per the English standards version of the Caltrans *Highway Design Manual*. The exceptions listed below have been identified.

Mandatory Design Exceptions

- Design Exception #1 – Stopping sight distance at the beginning of the northbound on-ramp and northbound off-ramp [Section 201.1].
- Design Exception #2 – Super-elevation rate on the northbound on-ramp [Section 202.2].
- Design Exception #3 – Horizontal curve radius on the northbound on-ramp [Section 203.2].
- Design Exception #4 – Shoulder width on the northbound on-ramp [Section 504.3(1)(c)].
- Design Exception #5 – Intersection spacing between the northbound on-ramp and Figueroa Street intersection [Section 504.3(3)].

Advisory Design Exceptions

- Design Exception #1 – Super-elevation at the northbound on-ramp [Section 202.2].
- Design Exception #2 – Side slopes (2:1) within project limits [Section 304.1].
- Design Exception #3 – Design speed at the northbound on-ramp [504.3(1)(a)].

Utility and Other Owner Involvement

John S. Gibson Boulevard and Harry Bridges Boulevard are two major utility corridors within the City of Los Angeles. The proposed project intends to maintain utility corridors along the existing John S. Gibson and Harry Bridges Boulevard alignments in order to minimize relocation of the existing subsurface facilities. This will require a longitudinal encroachment permit from Caltrans. The existing overhead utilities will be relocated.

Utilities under Figueroa Street would not require relocation. However, two 12-inch by 14-foot storm drain structures, owned by the Los Angeles County Flood Control District, would need to be avoided. There are also oil, gas, and telephone lines that would either need to be protected in place or encased.

Construction Staging

Construction vehicle staging and worker parking areas would be provided within city and state rights-of-way. The parcel bounded by I-110, Figueroa Street, and John S. Gibson Boulevard (assessor's parcel number 7417-001-900) would be used as a construction staging area.

Construction of the Build Alternative would be divided into three stages, as described below.

Stage 1

- Relocate utilities along Harry Bridges Boulevard.
- Construct a portion of the realigned John S. Gibson Boulevard and the new intersection with Harry Bridges Boulevard without affecting existing traffic.
- Construct a portion of the realigned Harry Bridges Boulevard without affecting existing traffic.
- Construct a portion of the northbound off-ramp and the John S. Gibson Boulevard undercrossing. Structure construction will stop just beyond the bend over John S. Gibson Boulevard, keeping the existing Figueroa Street open without any falsework over live traffic.
- Remove and/or relocate structures along northbound Figueroa Street south of D Street.
- Construct C Street cul-de-sac.

Stage 2

- Shift traffic to the newly constructed intersection and use temporary signal to channel traffic to and from John S. Gibson Boulevard, Harry Bridges Boulevard, Figueroa Street, and the C Street northbound ramps. All existing lanes and traffic movements would be provided.
- Construct a portion of the northbound on-ramp.
- Remove the existing Harry Bridges Boulevard, John S. Gibson Boulevard, and Figueroa Street intersections.
- Construct remaining portion of the northbound off-ramp to Harry Bridges Boulevard.

Stage 3

- Construct remaining portion of the northbound on-ramp, join the new intersection, and remove the existing ramp pavement.

A Transportation Management Plan (TMP) would be prepared as part of the project to minimize delay and inconvenience to the public. Construction of the proposed project would start in November 2012 and last until October 2014.

The proposed improvements would remove most of the existing I-110 northbound off-ramp at C Street and the associated embankment and landscaping. The new off-ramp alignment and the associated embankment would require new landscaping and irrigation.

1.4.3 Comparison of Alternatives

Final identification of a preferred alternative will occur subsequent to the public review and comment period. After the public circulation period, all comments will be considered. Caltrans will then select a final preferred alternative and make the final determination regarding the proposed project's effect on the environment. In accordance with CEQA, if no unmitigable significant adverse impacts are identified, Caltrans will prepare a Negative Declaration (ND) or Mitigated ND. Similarly, if Caltrans determines the action does not significantly affect the environment, Caltrans, as assigned by FHWA, will issue a Finding of No Significant Impact (FONSI) in accordance with NEPA.

1.4.4 Alternatives Considered but Eliminated from Further Discussion

During the initial phase of the project development process, the Project Development Team (PDT) held meetings to discuss other possible alternatives. The following describes alternatives that were considered but have been eliminated from further discussion as the will not adequately address the purpose and need of the proposed project.

1.4.4.1 Alternative 3, Northbound Off-Ramp to Harry Bridges Boulevard and Figueroa Street

A second Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard and Figueroa Street) was developed and identified in the PSR. This alternative had improvements that were identical to those of the Build Alternative (Alternative 3 in the PSR) but with the addition of access to northbound Figueroa Street directly from the northbound off-ramp. However, this alternative was dropped from further consideration due to community opposition to the northbound off-ramp to Figueroa Street. The separation structure presented additional potential visual, noise, and right-of-way impacts. The local residences raised this concern through a community workshop held by LAHD in April 2006. Since access to the community east of Figueroa Street and north of C Street is now provided from the new off-ramp at Harry Bridges Boulevard, as well as another freeway exit 2,000 feet north of C Street, the anticipated impacts on rights-of-way and the environment could not be justified to the community.

1.4.4.2 Transportation System Management

Transportation System Management (TSM) strategies consist of actions that increase the efficiency of existing facilities; they are actions that increase the number of vehicle trips a facility can carry without increasing the number of through lanes. Examples of TSM strategies include ramp metering, auxiliary lanes, turning lanes, reversible lanes, and traffic signal coordination. Because TSM strategies currently are employed in the project area (high-occupancy vehicle [HOV] and auxiliary lanes) and traffic congestion is still prevalent, TSM measures alone will not address the existing capacity deficiency of the I-110/C Street interchange.

Although TSM measures alone cannot satisfy the purpose and need of the proposed project, the following TSM measures have been incorporated into the proposed Build Alternative for the proposed project:

1. Maintain the TSM strategies that are currently in place on I-110, such as ramp metering, changeable message signs, and closed circuit television cameras; and

2. Maintain/add system elements to enhance existing freeway surveillance coverage, such as a system-wide fiber optic communication system, to tie in the Traffic Management Center (TMC).

1.4.4.3 Transportation Demand Management

Transportation Demand Management (TDM) encourages public and private transit, ridesharing programs, and bicycle and pedestrian improvements as elements of a unified urban transportation system. TDM addresses traffic congestion by reducing travel demand rather than increasing transportation capacity and focuses on alternatives such as ride sharing, flextime, increased transit usage, walking, and bicycling. TDM focuses on regional strategies for reducing the number of vehicle trips and vehicle miles traveled and increasing vehicle occupancy. It facilitates higher vehicle occupancy or reduces traffic congestion by expanding the traveler’s transportation choice. Because TDM strategies are currently employed in the project area and traffic congestion is still prevalent, TDM measures alone will not be adequate to meet the purpose of and need for the proposed project.

1.4.4.4 Multi-Modal Alternatives

Multi-modal alternatives integrate multiple forms of transportation, such as pedestrian, bicycle, automobile, rail, and mass transit. Because a range of transportation options is currently available in the project area and traffic congestion is still prevalent, multi-modal alternatives alone will not be adequate to meet the purpose of and need for the proposed project.

1.5 Permits and Approvals Needed

The permits, reviews, and approvals listed in Table 1-4 would be required to construct the proposed project.

Table 1-4: Permits and Approvals Needed

Permit/Approval	Agency	Status
Air Quality Conformity Determination	FHWA	Applicable documentation will be transmitted to FHWA after circulation of the draft environmental document.
Freeway Agreement	City of Los Angeles	Following project approval.
Grading and Construction Permits: Permit to close signal gates existing at-grade crossing (CPUC #121W-502.90) at Figueroa Street	California Public Utilities Commission (CPUC)	Applicable documentation to be completed by contractor prior to construction.
Coastal Permit (construction)	Los Angeles Harbor Department	Applicable documentation to be completed prior to construction.
National Pollutant Discharge Elimination System	State Water Resources Control Board	Applicable documentation to be completed by contractor prior to construction.
Groundwater dewatering permit for discharges of groundwater from construction and project dewatering to surface waters in coastal watersheds of Los Angeles	Regional Water Quality Control Board	Applicable documentation to be completed by contractor prior to construction.
Bureau of Engineering E Permit	City of Los Angeles	Applicable documentation to be completed prior to construction.
Encroachment Permit	California Department of Transportation	Applicable documentation to be completed prior to construction.
Railroad License/Agreement	Ports of Los Angeles and Long Beach	Applicable documentation to be completed prior to construction.

Source: Compiled by ICF International, 2010.

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

As part of the scoping and environmental analysis conducted for the proposed project, the following environmental resources were considered, and it was determined that there would be no impacts on these resources. Therefore, the resources listed below are not discussed in this document.

- *Farms and Timberlands:* There are no designated farmlands or agricultural lands in the area of the proposed project.
- *Wild and Scenic Rivers*: The proposed project would not be in the vicinity of a designated Wild and Scenic River.
- *Relocations:* The proposed project would be located entirely on land owned by Caltrans and LAHD and, therefore, would not result in any relocation.
- *Mineral Resources*: The proposed action is located in a highly urbanized area of the City of Los Angeles, the Wilmington community. The California Department of Conservation does not designate the project site as a Significant Mineral Aggregate Resource Area; thus, no impacts resulting from a loss of mineral resources would occur.
- *Section 4(f):* No publicly owned land of a public park; wildlife and waterfowl refuge of national, state, or local significance; or land of a historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) exists within the project limits. Therefore, no impacts on Section 4(f) resources would result.

2.1 Human Environment

2.1.1 Land Use

2.1.1.1 Existing and Future Land Use

Regulatory Setting

City of Los Angeles General Plan

The City of Los Angeles General Plan Framework Element, adopted in December 1996 and re-adopted in August 2001, is a strategy for long-term growth that sets a citywide context to guide subsequent amendments of the City's community plans, zoning ordinances, and other pertinent programs. The City of Los Angeles' Citywide General Plan Framework Element establishes the broad overall policy and direction for the entire general plan. It provides a citywide context and comprehensive long-range strategy to guide the general plan's other elements.

Collectively, the City's 35 community plans make up the Land Use Element of the general plan. The Department of City Planning established the New Community Plan Program (NCPP) to study the land use plans, thereby ensuring that they are kept up to date, and guide growth effectively. The aim is to encourage sustainable growth patterns while balancing the unique character of individual communities.

The proposed project is located within the Wilmington-Harbor City Community Plan Area.

Wilmington-Harbor City Community Plan

The project site is located in the Wilmington-Harbor City Community Plan Area. Adopted in July 1999, the Wilmington-Harbor City Community Plan is one of 35 community plans that make up the Land Use Element of the City of Los Angeles General Plan. It outlines general opportunities for the development of residential, commercial, industrial, public, transportation, and port-related land uses. One of the goals outlined in the Transportation Element of the community plan is the provision of a well-maintained, safe, efficient transportation network. Using Transportation System Management practices, the Wilmington-Harbor City Community Plan seeks to improve the capacity of the existing transportation system through minor physical improvements to roadways and major corridors.

Policy 15-1.1 of the community plan requires all major highways, secondary highways, and collector streets to maintain an acceptable level of service of no less than LOS D. Growth projections, predicted increases in port throughput, and a 2004 traffic study conducted by LAHD all indicate that the C Street/Figueroa Street intersection will have an unacceptable LOS by 2030.

Port of Los Angeles Plan

The Port of Los Angeles (POLA) Plan, adopted September 1, 1991, is part of the City of Los Angeles General Plan. It provides a 20-year guide pertaining to continued development and operation at the port. The plan is designed to be consistent with both the City of Los Angeles General Plan and the POLA Master Plan, discussed below.

Port of Los Angeles Master Plan

The POLA Master Plan, which was certified by the California Coastal Commission (effective April 1980), constitutes the Local Coastal Program (LCP) for the portion of the harbor under the jurisdiction of the City of Los Angeles. The plan does not specifically address the proposed project, but it is supportive of transportation improvements to and from the port.

The proposed project was conceived under the Transportation Element of the POLA Master Plan as part of the I-110/SR-47 Connectors Improvement Program. A complementary array of projects that seek to improve freeway access to port facilities, eliminate traffic conflicts, improve existing non-standard elements, and better accommodate existing and future traffic conditions for port and background traffic.

Transportation Plans and Programs

The Southern California Association of Governments (SCAG) is the federally designated Metropolitan Planning Organization (MPO) for the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. SCAG develops the Regional Transportation Plan (RTP) to provide a regional investment framework to address the region's transportation and related challenges. Transportation investments in the SCAG region that receive state and federal funds or require federal approvals (e.g., environmental clearance) must be consistent with the RTP and must be included in SCAG's RTIP when ready for funding.

The proposed project was originally listed in SCAG's federally approved 2008 RTP and 2008 RTIP, including amendments 1-15 and 1-17, as part of the Los Angeles County Local Highway Listings, with the following reference:

> ID: LA0F030 – Description: Project will improve flow of traffic from I-110 freeway on-/off-ramps at C Street by consolidating two closely spaced intersections into one.

The concept and scope of the proposed project is consistent with the project description in the RTIP and the assumptions in SCAG's regional air quality emissions analysis. As such, the project would not interfere with the timely implementation of all Transportation Control Measures (TCMs) identified in the currently approved State Implementation Plan (SIP). As such, project development would not conflict with or obstruct implementation of the SIP or TCMs.

The California Coastal Act of 1976

The proposed project is within the Coastal Zone. The Coastal Zone Management Act of 1972 (CZMA) is the primary federal law to preserve and protect coastal resources. Under the CZMA, coastal states are encouraged to develop coastal management plans. States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has not only developed a coastal management plan but has also enacted its own law, the California Coastal Act of 1976, to protect the coastline. The policies established under the California Coastal Act are similar to those of the CZMA. These policies protect public access, recreation, environmentally sensitive areas, agricultural lands, scenic beauty, and life and property from coastal hazards. The California Coastal Commission is responsible for implementation and oversight under the California Coastal Act.

Just as the federal CZMA delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments (15 coastal counties and 58 cities) to enact their own LCPs. LCPs are used to determine short- and long-term uses for coastal resources that are consistent with the goals of the California Coastal Act. However, a federal consistency determination may be needed as well.

The project site is within the boundary for the harbor Coastal Zone, as defined by the POLA Master Plan. Because construction would be limited to roadways surrounding the I-110/C Street interchange and would not involve existing waterways or other coastal resources, the proposed project would be consistent with the California Coastal Act of 1976. No further discussion is required.

Affected Environment

The project site and surrounding area are highly urbanized and have been for a number of decades. The Wilmington-Harbor City Community Plan designates land uses in the surrounding area as public facility, industrial, commercial, and single- and multiple-family uses. The area surrounding the I-110 interchange is designated mostly for public facility and industrial uses. East of Figueroa Street and north of C Street, land use designations are almost entirely single- and multi-family residential uses, with a small section designated for commercial uses adjacent to Figueroa Street. The area south of C Street is designated entirely for industrial use.

The existing I-110 interchange at C Street is a compact diamond interchange on the east side, providing on- and off-ramps for northbound traffic. On the west side, for those travelling south, the interchange provides a loop on-ramp in the northwest quadrant of the interchange nestled within a hook off-ramp. The interchange provides ingress and egress to/from I-110 at the Figueroa Street and C Street intersection. A brief description of the streets that intersect the project site (namely John S. Gibson Boulevard, Harry Bridges Boulevard, and Figueroa Street) is provided in Section 1.1.1, Existing Facility, of this document (page 1-1).

The proposed project would occur entirely in the Wilmington-Harbor City Community Planning Area. Port facilities are located just north of Harry Bridges Boulevard. These facilities extend into the Port of Los Angeles Planning Area just south of the project site. The area east of the project site is composed of industrial warehouse facilities. These are located east of the northbound on-ramp and the residential uses surrounding the D Street/Figueroa Street intersection. Finally, the area between C Street and Harry Bridges Boulevard (east of Figueroa Street and the northbound off-ramp) was formerly vacant land owned by the City of Los Angeles, which has recently been developed with a green buffer space between the port and the residential area of Wilmington along the north side of Harry Bridges Boulevard. Figure 1-5 shows existing land uses in the project area. Figures 2-1 and 2-2 show zoning and land use designations, respectively, for the project vicinity.

Future Land Use

Future land uses in the project area will be guided by the City's General Plan and Zoning Ordinance. These land use guidance documents orient future land uses in terms of types of use, placement, and density. They are subject to limitations such as jurisdictional boundaries, topographical and environmental conditions, and overriding state or federal regulations. In assessing the effects of a project, information obtained from land use guidance documents and approved local development projects contribute substantially to the development of an accurate characterization of future project area conditions.

Figure 2-1: Zoning Designations in Project Area

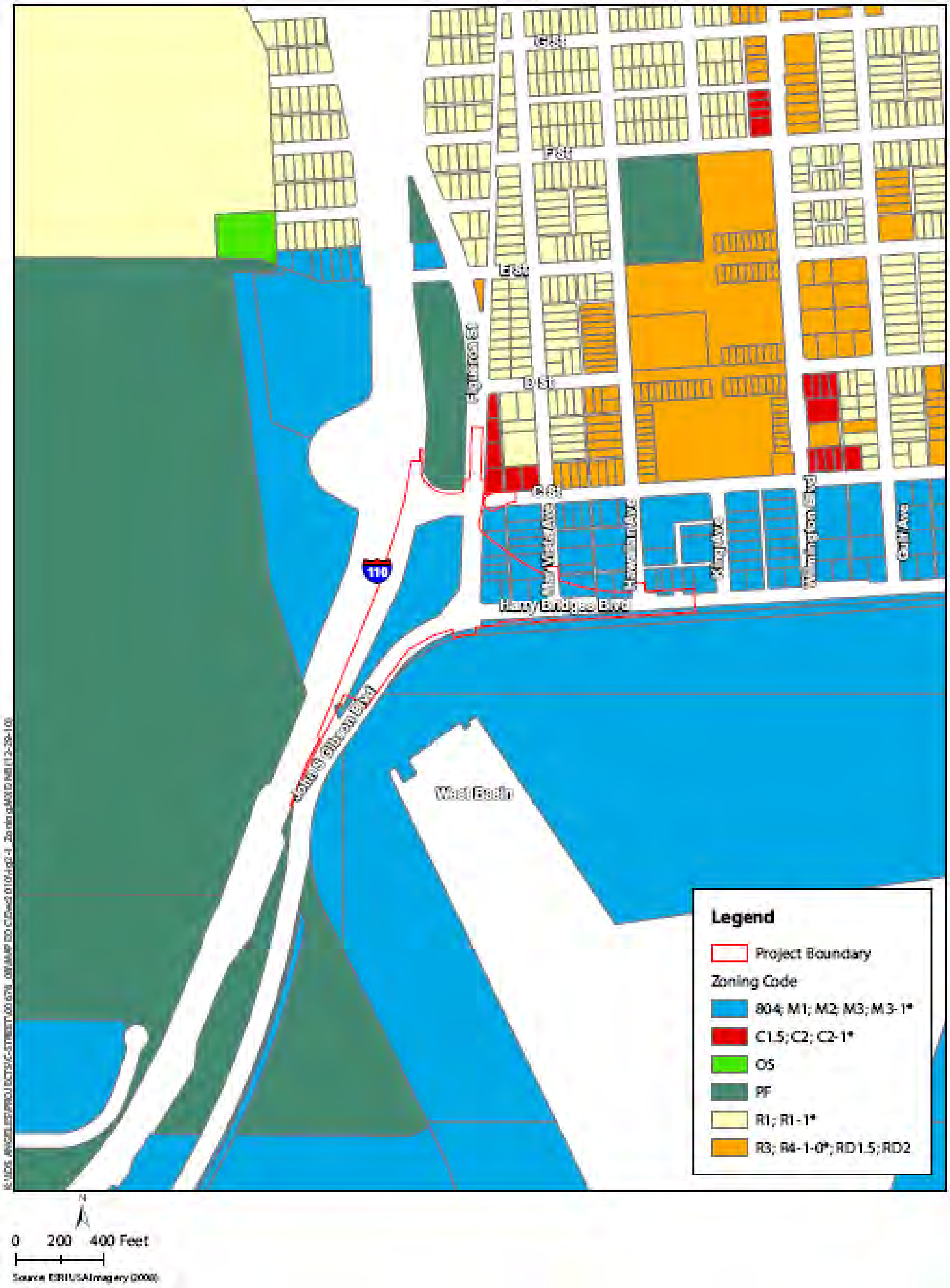
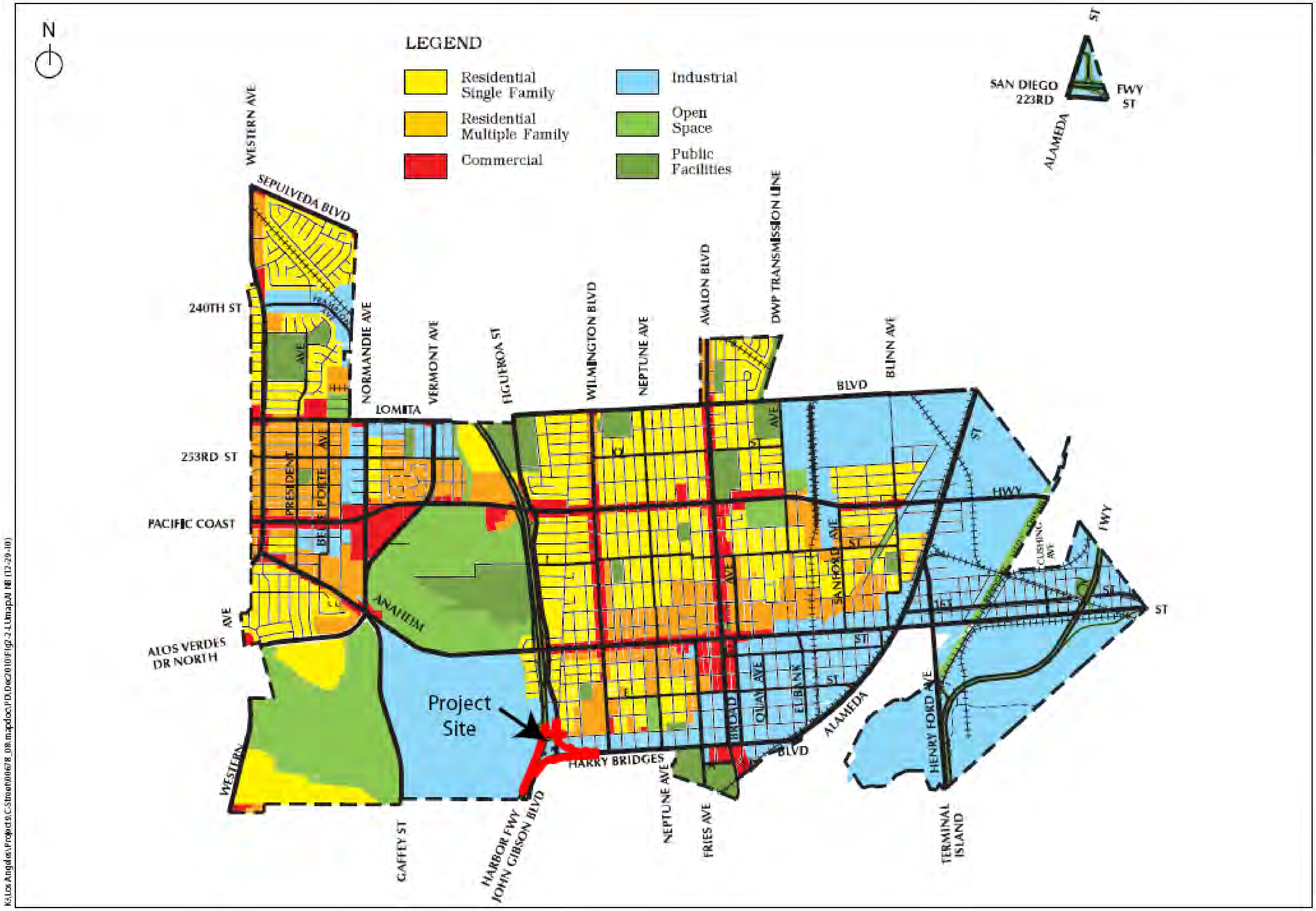


Figure 2-2: Land Use Designations in Project Area



After a review of LAHD and City databases, it was determined that one related project would occur within 0.5 mile of the project site. The John S. Gibson Boulevard/I-110 interchange project has been proposed for development to improve transportation and circulation at the port. The John S. Gibson Boulevard/I-110 interchange project and the proposed project are part of the I-110/SR-47 Connectors Improvement Program, a complementary array of transportation projects aimed at improving freeway access to port facilities, decreasing congestion, improving existing non-standard elements, and accommodating existing and future traffic conditions. The following projects have been proposed as part of the I-110/SR-47 Connectors Improvement Program:

- **South Wilmington Grade Separation –** Project plans indicate completion sometime during the summer of 2011; project involves separating either Fries Avenue or Marine Avenue with a crossing above the existing rail line to reduce traffic delays and hazards;
- **I-110/SR-47 Interchange and John S. Gibson Boulevard Intersection/Northbound I-110 Ramp Access –** Currently in planning stages; the project involves improvements to the northbound I-110 on-ramp to reduce delays and emissions along I-110 and SR-47, and
- **SR-47 On-Ramp and Off-Ramp at Front Street –** In planning stages; the project involves construction of a new off-ramp to Front Street and the relocation of the existing Front Street on-ramp to eliminate existing non-standard weaving and turning conditions.

The area surrounding the project site contains a mixture of residential and industrial land uses, with a heavy presence of port-related traffic. Transportation improvements provided under the I-110/SR-47 Connectors Improvement Program would reduce delays and eliminate hazards created by various existing non-standard roadway elements. There would also be minor transportation improvements related to signage, road conditions, and safety along the I-110 and SR-47 corridors as part of state and federal roadway maintenance.

In addition to the aforementioned local projects, there are a number of residential and public projects within a 3-mile radius of the project site that may be affected by the proposed project. These projects are listed below in Table 2-1 and shown in Figure 2-3.

Table 2-1: Approved Local and Related Projects

Map ID	Project Title and Location	Project Description	Project Status	Distance from Project (miles)
PORT OF LOS ANGELES PROJECTS[1]				
1	Berths 136–147 Marine Terminal, West Basin (TraPac), Port of Los Angeles Buffer Project	Element of the West Basin Transportation Improvement Projects. Reconfiguration of wharves and backlands. Expansion and redevelopment of the TraPac terminal, with a 30-acre buffer area to be constructed between Harry Bridges Boulevard and C Street.[2]	Final EIR certified by the Los Angeles Board of Harbor Commissioners in December 2007. Construction completed 2011. Second phase construction expected 2015–2020.	0.55
2	San Pedro Waterfront Project, Port of Los Angeles	A 5- to 7-year plan to develop the area along the west side of the Main Channel, from the Vincent Thomas Bridge to the 22nd Street Landing, including Crescent Avenue. Key components include construction of a North Harbor promenade, Downtown Harbor promenade, downtown water feature, Town Square at the foot of 6th Street, 7th Street Pier, Ports O' Call promenade, additional cruise terminal facilities, and a *Ralph J. Scott* fireboat display; enhancements to John S. Gibson Park; development of the California Coastal Trail along the waterfront; relocation of the Catalina Express terminal and the *S.S. Lane Victory*; extension of the Waterfront Red Car Line; and related parking improvements.	Final environmental impact statement/ environmental impact report (EIS/EIR) certified September 2009. Construction expected from late 2009 through 2014.	2.70
3	Cabrillo Way Marina, Port of Los Angeles	Redevelopment of the old marinas in the Watchorn Basin and development of the backland areas for a variety of commercial and recreational uses.	EIR certified December 2, 2003. Expected completion, June 2011.	3.46
4	Berths 226–236 (Evergreen) Container Terminal Improvements Project	Proposed redevelopment of existing container terminal, including improvements to wharves, adjacent backland, crane rails, lighting, utilities, gate complex, grade crossings, and adjacent roadways and railroad tracks.	EIR/EIS to be prepared. Construction expected 2011–2013.	2.22
5	Pacific L.A. Marine Terminal LLC, Crude Oil Terminal (formerly Pacific Energy), Pier 400, Port of Los Angeles	Proposal to construct a crude oil receiving facility on Pier 400, with tanks on Terminal Island and other locations on LAHD property; preferred location is the former Los Angeles Export Terminal. Construct new pipelines between Berth 408, storage tanks, and existing pipeline systems.	EIS/EIR certified November 2008. Construction expected to begin late 2010.	2.03
6	Ultramar Lease Renewal Project, Port of Los Angeles	Proposal to renew the lease between LAHD and Ultramar for continued operation of the marine terminal facilities at Berths 163–164 as well as associated tank farms and pipelines. Project includes upgrades to existing facilities to increase the proposed minimum throughput to 10 million barrels per year (mby), compared with the existing 7.5 mby.	Lease negotiations under way	1.08

[1] Project status information retrieved from Port of Los Angeles website (<http://www.portoflosangeles.org/>) via environmental document and harbor commission links.
[2] Correspondence with Wilmington community planner Monique Acosta.

Map ID	Project Title and Location	Project Description	Project Status	Distance from Project (miles)
7	Berths 97–109, China Shipping Development Project	Development of the China Shipping Terminal, Phases I, II, and III, including wharf construction, landfill and terminal construction, and backland development.	Draft EIS/EIR released August 2006. Phase I construction complete. Recirculated draft EIS/EIR released April 2008. Final EIS/EIR for Phase II and III in preparation. Construction for Phases II and III expected 2010–2015.	1.22
8	Berths 171–181, Pasha Marine Terminal Improvements Project, Port of Los Angeles	Redevelopment of existing facilities at Berths 171–181 as an omni (multi-use) facility.	Conceptual design. EIR on hold.	1.32
9	Berths 206–209, Interim Container Terminal Reuse Project, Port of Los Angeles	Proposal to allow interim reuse of former Matson terminal while implementing “green” terminal measures.	Final EIR certified. Construction on hold.	1.80
10	Southern California International Gateway (SCIG) Project, Port of Los Angeles	Construction and operation of a 157-acre intermodal container transfer facility (ICTF) and various associated components, including the relocation of an existing rail operation.	NOP released September 30, 2005. Draft EIR expected in early 2010.	3.21
11	San Pedro Waterfront Enhancements Project, Port of Los Angeles	Project includes improving/developing new pedestrian corridors along the waterfront (4 acres), landscaping, parking, increased waterfront access from upland areas, and creating 16 acres of public open space.	Mitigated ND approved in April 2006. Construction began 2008, with completion expected in November 2010.	1.73
12	Joint Container Inspection Facility, Ports of Los Angeles and Long Beach	Construction and operation of a facility where random and suspicious containers arriving at the Ports of Los Angeles and Long Beach would be searched and inspected.	In planning stage. EIR to be prepared.	2.27
13	Berths 302–305, (APL) Container Terminal Improvements Project	Container terminal and wharf improvements project, including a terminal expansion area and new berth on the east side of Pier 300.	EIS/EIR to be prepared. Construction expected 2010–2013.	3.00
14	South Wilmington Grade Separation	An elevated grade separation structure would be constructed at Fries Avenue or Marine Avenue to eliminate traffic delays caused by trains using the existing rail line and those that will use the new ICTF railyard. The elevated grade would include a connection to Water Street. There would be a minimum of 24.5 feet of clearance for rail cars traveling under the grade separation structure.	Conceptual planning. Current planning indicates summer 2011 completion.	0.88
15	Wilmington Waterfront Master Plan (Avalon Development District Project)	Planned development intended to provide waterfront access and promote development along Avalon Boulevard.	Final EIR certified in June 2009. Construction expected 2009–2020.	1.03

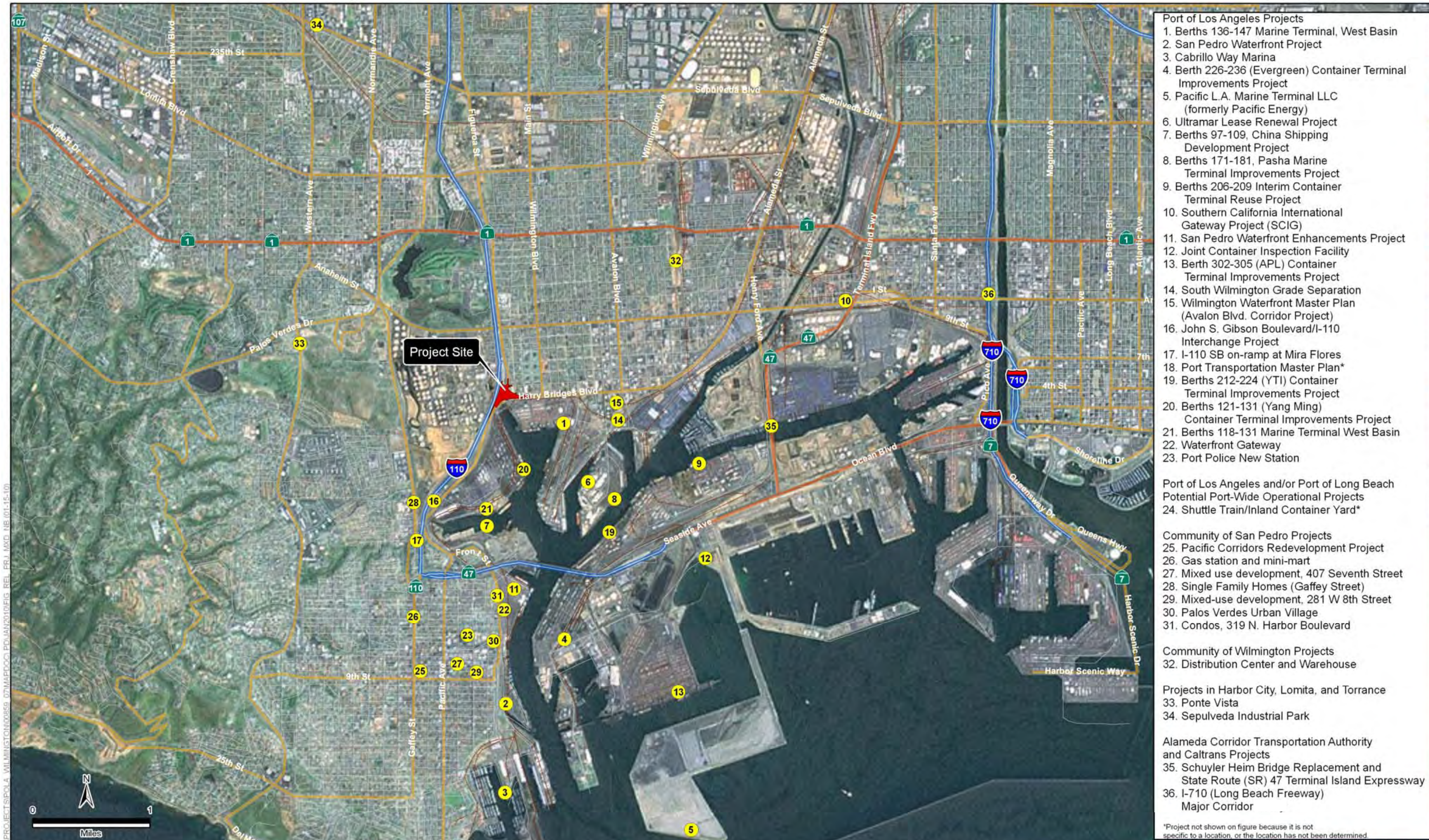
Map ID	Project Title and Location	Project Description	Project Status	Distance from Project (miles)
16	John S. Gibson Boulevard/I-110 Interchange Project	Part of the I-110/SR-47 Connectors Improvement Program. Involves improvements to I-110 northbound ramp at the intersection with John S. Gibson Boulevard to reduce delays and emissions in the I-110/SR-47 area.	Initial study/ environmental assessment being prepared for the project.	0.40
17	I-110 Southbound On-Ramp at Mira Flores	Part of the I-110/SR-47 Connectors Improvement Program. Involves improvements to the I-110 on-ramp at Mira Flores.	Conceptual planning.	1.45
18	Port Transportation Master Plan	Port-wide transportation master plan for roadways in and around port facilities. Present and future traffic improvement needs are being determined based on existing and projected traffic volumes. Some improvements under consideration include I-110/SR-47/Harbor Boulevard interchange improvements, Wilmington grade separations, and additional traffic capacity analysis for the Vincent Thomas Bridge.	Conceptual planning completed.	0.60
19	Berths 212–224, (YTI) Container Terminal Improvements Project	Modifications involving wharf upgrades and backland reconfiguration, including new buildings.	EIR/EIS to be prepared. Construction expected 2011–2013.	1.47
20	Berths 121–131, (Yang Ming) Container Terminal Improvements Project	Reconfiguration of wharves and backlands. Expansion and redevelopment of the Yang Ming Terminal.	EIR/EIS to be prepared. Construction expected 2011–2013.	0.70
21	Berths 118–131, Marine Terminal West Basin	Element of the West Basin Transportation Improvements Projects. Reconfiguration of wharves and backlands. Joint operation of the Yang Ming and China Shipping terminals.	EIR being completed.	0.86
22	Waterfront Gateway	This is part of the San Pedro Waterfront Promenade Project. Development initiated for waterfront promenade between Vincent Thomas Bridge and Fire Station No. 112.	Approved project. Phase I construction under way.	1.5
23	Port Police (New Station)	330 S. Centre Street (between 3rd and 5th Streets).	Construction in progress. Expected completion in April 2011.	2.12
PORT OF LOS ANGELES AND/OR PORT OF LONG BEACH POTENTIAL PORT-WIDE OPERATIONAL PROJECTS				
24	Shuttle Train/Inland Container Yard	Alameda Corridor Transportation Authority (ACTA) program to encourage rail shuttle service between LAHD's on-dock rail facilities and a rail facility in Colton (in the Inland Empire). The pilot program would consist of a daily train to and from Colton. Containers would be trucked between the Colton rail facility and the facility of the cargo's owner.	Preliminary study in progress.	Within 1.00

Map ID	Project Title and Location	Project Description	Project Status	Distance from Project (miles)
COMMUNITY OF SAN PEDRO PROJECTS				
25	Pacific Corridors Redevelopment Project, San Pedro	Development of commercial/retail, manufacturing, and residential components. Construction under way for four housing developments and Welcome Park.	Project under way. Estimated 2032 completion year, according to Community Redevelopment Agency of Los Angeles.	2.50
26	Gas Station and Mini-Mart, 311 N. Gaffey Street, San Pedro (north of Sepulveda Boulevard)	Construct six-pump gas station and 1,390-square-foot mini-mart.	Project on hold. Construction has not begun.	1.97
27	Mixed-Use Development, 407 W. 7th Street (at Mesa Street), San Pedro	Construct 5,000-square-foot retail space and 87-unit apartment complex.	In final stages of construction. Placed on hold by developer.	2.38
28	Single-Family Homes, 1427 N. Gaffey Street (at Basin Street), San Pedro	Construct 135 single-family homes on approximately 2 acres.	Under construction. Estimated completion year of 2009, according to LADOT.	1.29
29	Mixed-use Development, 281 W. 8th Street (near Centre Street)	Construct 72 condos and 7,000-square-foot retail space.	Construction has not begun. LADOT has no estimate for the completion year.	2.41
30	Palos Verdes Urban Village, 550 South Palos Verdes Street, San Pedro	Construct 251 condos and 4,000-square-foot retail space.	Construction has not begun. Estimated completion year is 2011, according to LADOT.	2.17
31	Condos, 319 N. Harbor Boulevard, San Pedro	Construct 94 residential condos.	LADOT has no estimate for the completion year.	1.80
COMMUNITY OF WILMINGTON PROJECTS				
32	Distribution Center and Warehouse	Construct 135,000-square-foot distribution center and warehouse on 240,000-square-foot lot with 47 parking spaces at 755 East L Street (at McFarland Avenue) in Wilmington.	Construction has not begun; lot is vacant. LADOT has no estimate for the completion year.	1.83
PROJECTS IN HARBOR CITY, LOMITA, AND TORRANCE				
33	Ponte Vista	Construct 1,725 condos, 575 senior housing units, and four baseball fields at 26900 Western Avenue (near Green Hills Park), Lomita. Rolling Hills Prep School being developed on an adjacent lot.	Draft EIR issued November 2006. Construction has not begun. LADOT estimates 2012 for completion year.	1.79
34	Sepulveda Industrial Park	Construct 154,105-square-foot industrial park (six lots) for Sepulveda Industrial Park (TT65665), 1309 Sepulveda Boulevard, Torrance (near Normandie Avenue).	Construction has not begun. LADOT has no estimate for the completion year.	3.18

Map ID	Project Title and Location	Project Description	Project Status	Distance from Project (miles)
ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY AND CALTRANS PROJECTS[3]				
35	Schuyler Heim Bridge Replacement and SR 47 Terminal Island Expressway	ACTA/Caltrans project to replace the Schuyler Heim Bridge with a fixed structure and improve the SR-47/Henry Ford Avenue/ Alameda Street transportation corridor by constructing an elevated expressway from the Schuyler Heim Bridge to Pacific Coast Highway/SR-1.	Construction will begin 2010/2011.	2.28
36	I-710 (Long Beach Freeway) Major Corridor Project	Develop multi-modal, timely, cost-effective transportation solutions to traffic congestion and other mobility problems along approximately 18 miles of I-710 between the San Pedro ports and SR-60. Early action projects include a) **Port Terminus:** Reconfiguration of SR-1 (Pacific Coast Highway) and Anaheim interchange and expansion of the open/green space at Cesar E. Chavez Park; and b) **Mid-Corridor Interchange:** Reconfiguration project for Firestone Boulevard interchange and Atlantic/Bandini interchange.	The Major Corridor Study has been completed and the EIR/EIS for the I-710Major Corridor Project is being prepared.	4.16
Note*:* Construction date for port projects (projects 1–24) based on an assumption that the projects will be approved by LAHD unless otherwise stated. Source: Review of Wilmington Waterfront Project EIS/EIR. Port of Los Angeles web site. Available: <http://www.portoflosangeles.org/>. Also, correspondence with Caltrans staff (Sarah E. Berns). Compiled by ICF International in October 2009.				

[3] Project information from email correspondence with Sarah E. Berns, California Department of Transportation.

Figure 2-3: Approved Local and Related Projects



SOURCE: ESRI Streetmap USA (2007), ESRI Imagery (2006)

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Environmental Consequences

Construction Impacts

Alternative 1: No-Build Alternative

The No-Build Alternative would not require construction; therefore, existing or future land uses would not be affected by construction.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Construction activities would occur along I-110, Harry Bridges Boulevard, C Street, Figueroa Street, John S. Gibson Boulevard, Mar Vista Avenue, King Avenue, and Hawaiian Avenue. Construction activities would be limited to the existing roadway and public rights-of-way; construction staging would occur on a publicly owned undeveloped lot. As such, the proposed project would be consistent with existing land uses and would not require the acquisition of adjacent properties or change established or planned future land uses in the surrounding area. John S. Gibson Boulevard and Harry Bridges Boulevard are two major utility corridors within the port. All utilities in the area of Harry Bridges Boulevard east of its intersection with Figueroa Street to end of the project alignment would require relocation. Further analysis of utility impacts is provided in Section 2.1.3.4.

Existing land use patterns in the project area would not be altered. Construction of the proposed project would last for approximately 23 months, resulting in some temporary short-term effects on surrounding land uses related to noise, air quality, and access because of lane closures, traffic detours, and utility disruptions.

No new right-of-way would be required, and all land used during construction would be publicly owned. Current transportation systems management (TSM) measures for I-110 would be maintained and updated as part of the project. Since construction activities would be temporary and would occur entirely within publicly owned rights-of-way, no adverse effects under NEPA or significant impacts under CEQA would occur that would affect land uses surrounding the project alignment.

Operational Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, the I-110/C Street interchange would continue to operate as is. No existing land uses or future land uses would be affected.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

The proposed project is intended to support existing and projected future land uses in the area. Despite past improvements to this segment of I-110 and efforts to encourage multi-modal transportation, traffic congestion has become a problem at the I-110/C Street interchange due to a steady increase in port throughput and port-related development. Increases in port-related traffic, combined with local residents' concerns about safety, noise, and air quality, have led to a need for transportation improvements, including improved freeway access and multi-modal transportation improvements on surrounding roadways. The proposed project would contribute to these objectives by replacing the existing northbound off-ramp with a more direct off-ramp that leads to eastbound Harry Bridges Boulevard, as well as by widening the Figueroa Street/ Harry Bridges Boulevard/John S. Gibson Boulevard intersection to accommodate a left-turn pocket in both directions. This would help to separate port-bound traffic from local residential traffic, by providing more direct access to the port circulation system via Harry Bridges Boulevard. Upon completion of the project, traffic and safety conditions at the I-110/C Street and the Figueroa Street/Harry Bridges Boulevard/John S. Gibson Boulevard intersections are expected to improve. There will be a transfer of property among the City of Los Angeles, the Los Angeles Harbor Department, and Caltrans for the proposed project due to the realignment of the roadways.

This alternative would not conflict with existing land uses and would be consistent with all existing and future land uses as well as new developments in the study area. As such, no substantial adverse effects under NEPA or significant impacts under CEQA on land use would occur as a result of the Build Alternative.

Avoidance, Minimization, and/or Mitigation Measures

Disruption of use during project construction related to traffic and access impacts on local roadways would be mitigated by implementing a Traffic Staging Plan and a Traffic Management Plan (TMP).

LU-1 LAHD or its designee shall prepare a TMP to minimize direct and cumulative construction impacts on the community. The TMP shall be developed in consultation with the Los Angeles Department of Transportation and the California Department of Transportation, and it shall be provided with the construction plan to the City of Los Angeles Police Department and the City of Los Angeles Fire Department prior to commencement of construction activities. The TMP shall include the following implementation plans:

- *Public Information*: Provide project updates to affected residents and businesses, including the general public, via brochures and mailers, community meetings, and web site information;
- *Motorist Information*: Provide project information using changeable message signs and ground-mounted signs;
- *Incident Management*: Implement Construction Zone Enhanced Enforcement Program , freeway service patrol, and California Highway Patrol traffic handling; and
- *Traffic Management during Construction*: Provide a traffic lane closure chart, detour routes, pedestrian routes, residential and commercial access routes, and temporary traffic signals during construction.

2.1.1.2 Consistency with State, Regional, and Local Plans and Programs

Regulatory Setting

State

The California Coastal Act of 1976

The proposed project is within 3 miles of the Coastal Zone. The CZMA is the primary federal law to preserve and protect coastal resources. The CZMA sets up a program under which coastal states are encouraged to develop coastal management plans. States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has not only developed a coastal management plan but has also enacted its own law, the California Coastal Act of 1976, to protect the coastline. The policies established under the California Coastal Act are similar to those of the CZMA. These policies protect public access, recreation, environmentally sensitive areas, agricultural lands, scenic beauty, and life and property from coastal hazards. The California Coastal Commission is responsible for implementation and oversight under the California Coastal Act.

Just as the federal CZMA delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments (15 coastal counties and 58 cities) to enact their own LCPs. LCPs are used to determine short- and long-term uses for coastal resources that are consistent with the goals of the California Coastal Act. A federal consistency determination may be needed as well.

The project site is within the boundary for the harbor Coastal Zone, as defined by the POLA Master Plan. Because construction would be limited to roadways surrounding the I-110/C Street interchange and would not involve existing waterways or other coastal resources, the proposed project would be consistent with the California Coastal Act of 1976. However, a permit will need to be obtained from the Los Angeles Harbor Commission once the environmental document has been approved and certified. No further discussion is required.

Regional

Regional Comprehensive Plan

The Regional Comprehensive Plan (RCP) was developed by SCAG in partnership with 13 subregions and adopted in 2008. SCAG is the metropolitan planning organization for six counties in Southern California: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. According to the RCP, SCAG projects that 24 million people will reside in the six-county SCAG region by 2035. The RCP is intended to be a problem-solving guidance document that responds directly to challenges facing Southern California as identified the annual State of the Region report card. It responds to SCAG's Regional Council directive in the 2002 Strategic Plan to develop a holistic, strategic plan for defining and solving inter-related housing, traffic, water, air quality, and other regional challenges. The RCP is a structured policy framework that links broad principles to an action plan that moves the region toward balanced goals. It includes vision statements and guiding principles based on the region's adopted Compass Growth Vision Principles for Sustaining a Livable Region. These statements further articulate how the RCP can promote and sustain the region's mobility, livability, and prosperity for future generations.

2008 Regional Transportation Plan

The RTP is a long-term (minimum of 20 years) vision document that outlines transportation goals, objectives, and policies for the SCAG region. The 2008 RTP, titled "Making the Connections 2035," was adopted by SCAG on May 8, 2008. FHWA and the Federal Transit Administration (FTA) approved the 2008 RTP in June 2008. This regional planning document is required by a number of state and federal mandates and requirements, which include the Intermodal Surface Transportation Efficiency Act of 1991, the federal Clean Air Act, and the California Clean Air Act. The proposed I-110/C Street project is included in the SCAG 2008 RTP (project number 08-0H1300).

2008 Regional Transportation Improvement Program

The 2008 Regional Transportation Improvement Program (RTIP) is a capital listing of transportation projects proposed over a 6-year period. The RTIP must include all transportation projects that require federal funding as well as all regionally significant transportation projects for which federal approval (by FHWA or FTA) is required, regardless of funding source. The project is listed in the final 2008 RTIP under Project ID LA0F030 and project description "I-110 Freeway/C Street Interchange Improvement – Modification of Existing Interchange." The project design concept and scope (Build Alternative) are consistent with the project description in the approved 2008 RTIP. All projects included in the 2008 RTIP (and in the State Transportation Improvement Program) are reviewed for conformity with air quality plans.

Local Plans

City of Los Angeles General Plan

Wilmington-Harbor City Community Plan. The Wilmington-Harbor City Community Plan was adopted on July 14, 1999. It establishes goals, objectives, policies, and programs applicable to the community. The Wilmington-Harbor City Community Plan Area is bounded by Lomita Boulevard, the City of Long Beach, the Port of Los Angeles, Gaffey Street, and Normandie Avenue. Because of its proximity to the Port of Los Angeles, a significant portion of the southeast community plan area is designated for industrial and light industrial uses. The industrial sector is a major contributor to the local economy. The plan encourages both new industrial growth as well as development of improved circulation systems to accommodate growth. It also contains policies to govern direct access to freeways for trucks, discourage nonresidential traffic on residential streets, and upgrade the circulation system.

The project site is located just north of Harry Bridges Boulevard, which forms the southern boundary of the Wilmington-Harbor City Community District. The plan recommends integrating future development of the port with the Wilmington community, including changes to transportation and circulation systems and port land acquisitions. One of the goals of the plan is the maintenance of a safe and efficient transportation system through implementation of minor physical improvements and policies pertaining to LOS and growth. The plan also recommends interagency coordination in the planning and implementation of port projects to facilitate efficiency in port operations and serve the interests of adjacent communities (LAHD 2005).

Port of Los Angeles Plan. The POLA Plan is part of the City of Los Angeles General Plan. The POLA Plan provides a 20-year guide to the continued development and operation of the port. It is designed to be consistent with the POLA Master Plan. The preferred long-range water and land uses for the port include nonhazardous liquid and dry bulk cargo, general cargo, commercial fishing operations, and port-related commercial and industrial uses. However, these preferred goals are subject to the following criteria: changes in economic conditions that affect the types of commodities traded in waterborne commerce, the economic life of existing facilities handling or storing hazardous cargo, and the precautions deemed necessary to maintain national security (LAHD 2005).

Port of Los Angeles Master Plan. The POLA Master Plan, which was certified by the California Coastal Commission and became effective in April 1980, constitutes the LCP for the portion of the harbor under the jurisdiction of the City of Los Angeles. The plan does not specifically address the proposed project but is generally supportive of transportation improvements to and from the Port of Los Angeles.

The proposed project was conceived under the POLA Master Plan as part of the I-110/SR-47 Connectors Improvement Program, which is a complementary array of projects that seek to improve freeway access to port facilities, eliminate traffic movement conflicts, improve existing non-standard elements, and accommodate existing and future traffic conditions for port and background traffic.

Habitat Conservation Plan/Natural Community Conservation Plan

The project site is not located within an adopted Multiple Species Habitat Conservation Plan (MSHCP), Habitat Conservation Plan (HCP), or Natural Community Conservation Plan (NCCP).

Specific Development Proposals

There are a few adjacent transportation projects that will occur in the vicinity of the C Street interchange, which is part of the LAHD’s West Basin improvement plan. The SR-47/I-110/John S. Gibson Boulevard interchange project (EA 26060K) is located less than 1 mile south of the interchange on I-110. The SR-47/I-110/John S. Gibson Boulevard interchange project is being developed concurrently with this project. Two of the LAHD projects, the Harry Bridges Boulevard widening project and the Fries Avenue grade separation project, are currently in the design phase. The Harry Bridges Boulevard widening project will match the widening and realignment of the improvements proposed by this project. The Fries Avenue project is related to the relocation of the port’s entrance and exit gates.

Environmental Consequences

Construction Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, existing land uses in the project area would remain. The No-Build Alternative would not alter the existing conditions at the project site. Thus, no construction activities would be conducted at the project site, and no adverse effects under NEPA or significant impacts under CEQA would occur as a result of regional or local plan inconsistencies.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Construction activities would be conducted in accordance with the City’s applicable municipal code policies and guidelines as well as in accordance with Caltrans guidelines. As such, no plan inconsistencies are expected to occur during the construction period of the proposed Build Alternative.

Operational Impacts

Alternative 1: No-Build Alternative

Under this alternative, the proposed project would not occur. This alternative would not meet the objectives of the proposed project, which are designed to reduce congestion at the C Street, Harry Bridges Boulevard, I-110 interchange; accommodate local access demands for I-110; reduce traffic congestion on local roads as part of a number of planned roadway, intersection, and interchange improvements; and serve the local transportation network needs of planned future development on adjacent vacant land and at the port.

Under the No-Build Alternative, existing land uses in the project area would remain. This alternative would not be in compliance with the Wilmington Community Plan or the 2008 RTP and 2006 RTIP.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

This alternative would improve traffic operations at the on- and off-ramps (see Section 2.1.3.5 for a detailed discussion of traffic impacts). Alternative 2 is consistent with all of the previously referenced plans. The proposed improvements are consistent with the project description in the current 2008 RTIP and are identified in the 2008 RTP. The proposed I-110/C Street intersection has been designed so that it would be able to accommodate future growth in port cargo and expansion as well as a more direct route to the terminal while minimizing traffic congestion.

Alternative 2 involves the construction of an improved interchange, which is intended to reduce traffic congestion. Because I-110, C Street, and Harry Bridges Boulevard are existing roadways, no new physical division would be created under this alternative. Improvements to existing transportation facilities would be compatible with the Wilmington-Harbor City Community Plan and surrounding land uses, including residential and industrial uses.

Roadways are also considered an integral part of development and land use patterns because they are required to facilitate travel and connectivity between areas. Since I-110, C Street, and Harry Bridges Boulevard are existing roadways, Alternative 2 would not diminish access to or the ability to use project-adjacent vacant land and open spaces, nor would it physically divide an established community. No adverse effects under NEPA or significant impacts under CEQA would occur.

Alternative 2 would require no additional right-of-way acquisition. All land required for improvements is publicly owned land. This alternative would not conflict with existing land uses and would be considered consistent with the existing as well as future land uses in the study area.

Alternative 2 is consistent with all of the previously referenced plans. The proposed improvements (project number LA0F030) are consistent with the project description in the 2008 RTIP and identified in the 2006 RTP. I-110 would remain a primary freeway, while C Street would remain a residential road. Therefore, Alternative 2 would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the proposed project (including a general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are proposed because no adverse effects under NEPA or significant impacts under CEQA with respect to established plans or programs are anticipated.

2.1.1.3 Parks and Recreation

Regulatory Setting

City of Los Angeles General Plan

The general plan comprises park- and recreation-related goals, objectives, and policies that are applicable to the proposed project. The overall goal of the Open Space and Conservation section of the general plan is to provide regional public and private open space that serve the City's population and is unthreatened by encroachment from other land uses.[4]

Affected Environment

The area in the immediate vicinity of the project site has been developed primarily for industrial uses; it is generally not used for parks and recreational purposes. The closest park and recreational facility in the vicinity of the project site is the 7.5-acre Wilmington Recreation Center, located approximately 0.5 mile east of the existing interchange. The Harry Bridges Boulevard buffer area is located between Harry Bridges Boulevard and C Street, bounded by Figueroa Street to the west and Lagoon Avenue to the East. The Harry Bridges Boulevard buffer provides a 30-acre public open space to separate port operations and adjacent residences north of C Street. Both resources are protected under Section 4(f).

[4] City of Los Angeles General Plan. Conservation Element. Adopted March 10, 2001.

Environmental Consequences

Construction Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, the I-110/C Street interchange would continue to operate as is. Nearby recreational uses, including the Wilmington Recreation Center and the Harry Bridges Boulevard buffer, would not be affected.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Construction activities would be limited to the existing roadway areas and public rights-of-way. Construction activities and staging for the Build Alternative would occur on and near the Harry Bridges Boulevard buffer; however, construction planning of the Build Alternative has been coordinated with the construction of the buffer area, which was completed mid-2011. Construction related activities would result in some increase in noise and dust which would affect the northeastern corner of the buffer area. This area has been developed with some trees and developed with the knowledge that the Build Alternative would affect a small portion of this area. Because this buffer has been developed in coordination with the proposed project, and construction activities would only effect a small section of the park that is not developed with any recreational uses, construction activities would not have adverse effects under NEPA or significant impacts under CEQA on the area. Additionally, the proposed project would not involve the use of Section 4(f) properties; therefore, no adverse effects on Section 4(f) resources would occur.[5] See Appendix B, *Resources Relative to the Requirements of Section 4(f)*, for further discussion of potential Section 4(f) uses resulting from the Build Alternative. Construction activities would not affect access to existing parks or the Wilmington Recreation Center. The proposed Build Alternative would not result in any permanent or temporary disruptions of recreational activities at the center or the buffer area. Additionally, pedestrian and vehicular access to the center and buffer area would be maintained during construction of the proposed Build Alternative.

Operational Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, the I-110/C Street interchange would continue to operate as is. Nearby recreational uses would not be affected.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

The Build Alternative would require a small acquisition of land from the recently constructed Harry Bridges Boulevard buffer area in order to construction the cul-de-sac on C Street. However, construction of the buffer area was carried out in coordination with the design of the Build Alternative. Consequently, the land to be acquired was not developed with recreational facilities and the green space would be allowed to function, as planned, as a buffer zone between the residential uses north of Harry Bridges Boulevard and the port operations to the south. No adverse

[5] Parsons Transportation Group. 2007. Project Study Report: C Street/I-110 Access Ramp Improvements. January.

effects on park users were identified, and soundwalls are not proposed in the vicinity of the green-space buffer. In addition, the proposed project would not involve the use of Section 4(f) properties. This alternative would not affect access to the buffer zone or the Wilmington Recreation Center. As such, no substantial adverse effects under NEPA or significant impacts under CEQA on park and recreational uses and no use of Section 4(f) park resources in the project area would occur as a result of the Build Alternative.

Avoidance, Minimization, and/or Mitigation Measures

Because the Build Alternative would not result in adverse effects on parks or recreation under NEPA or significant impacts under CEQA, no avoidance, minimization, and/or mitigation measures are required.

2.1.2 Growth

Regulatory Setting

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969, require evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influences of a proposed action and at some time in the future. The CEQ regulations, 40 Code of Federal Regulations (CFR) 1508.8, refer to these consequences as “secondary impacts.” Secondary impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

CEQA requires the analysis of a project’s potential to induce growth. State CEQA Guidelines Section 15126.2(d) require that environmental documents “…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…”

Affected Environment

The City of Los Angeles has experienced constant population increases over the last two decades. According to the SCAG 2008 RTP, the City’s population is projected to increase by 11.6 percent between 2005 and 2035. The number of households in the City will increase by 24.8 percent, and employment is expected to increase by 13.0 percent in the same time period.

The study area includes census tract 2949, which contains the residential population that is likely to be affected by the proposed project (Figure 2-4 shows the population study area). Land uses in the study area include industrial and public facilities. Growth trends in the study area are in sync with those of the City and Los Angeles County. According to the SCAG 2008 RTP, between 2005 and 2035, the population of the study area will increase by11.1 percent, the number of households will increase by 21.8 percent, and employment will increase by 9.2 percent.

Tables 2-2 through 2-4 provide the projected population, housing, and employment estimates from the 2008 SCAG RTP through the planning year of 2035 for the City and County of Los Angeles as well as the census tract located within the study area.

Table 2-2: 2008 SCAG RTP 2005–2035 Population Projections

Study Area:	2005	2015	% Increase from 2005–2015	2025	% Increase from 2005–2025	2035	% Increase from 2005–2035
County of Los Angeles	10,206,001	10,971,602	7.5%	11,678,552	14.4%	12,338,620	20.9%
City of Los Angeles	3,955,392	4,128,125	4.3%	4,277,732	8.1%	4,415,772	11.6%
Tract 2949	3,516	3,662	4.2%	3,790	7.8%	3,907	11.1%

Source: SCAG RTP 2008 Population Projections.

Table 2-3: 2008 SCAG RTP 2005–2035 Household Projections

Study Area:	2005	2015	% Increase from 2005–2015	2025	% Increase from 2005–2025	2035	% Increase from 2005–2035
County of Los Angeles	3,212,434	3,509,580	9.2%	3,788,732	18.0%	4,003,501	25.0%
City of Los Angeles	1,306,079	1,424,701	9.1%	1,532,998	17.4%	1,616,578	24.8%
Tract 2949	839	909	8.3%	973	16.0%	1,022	21.8%

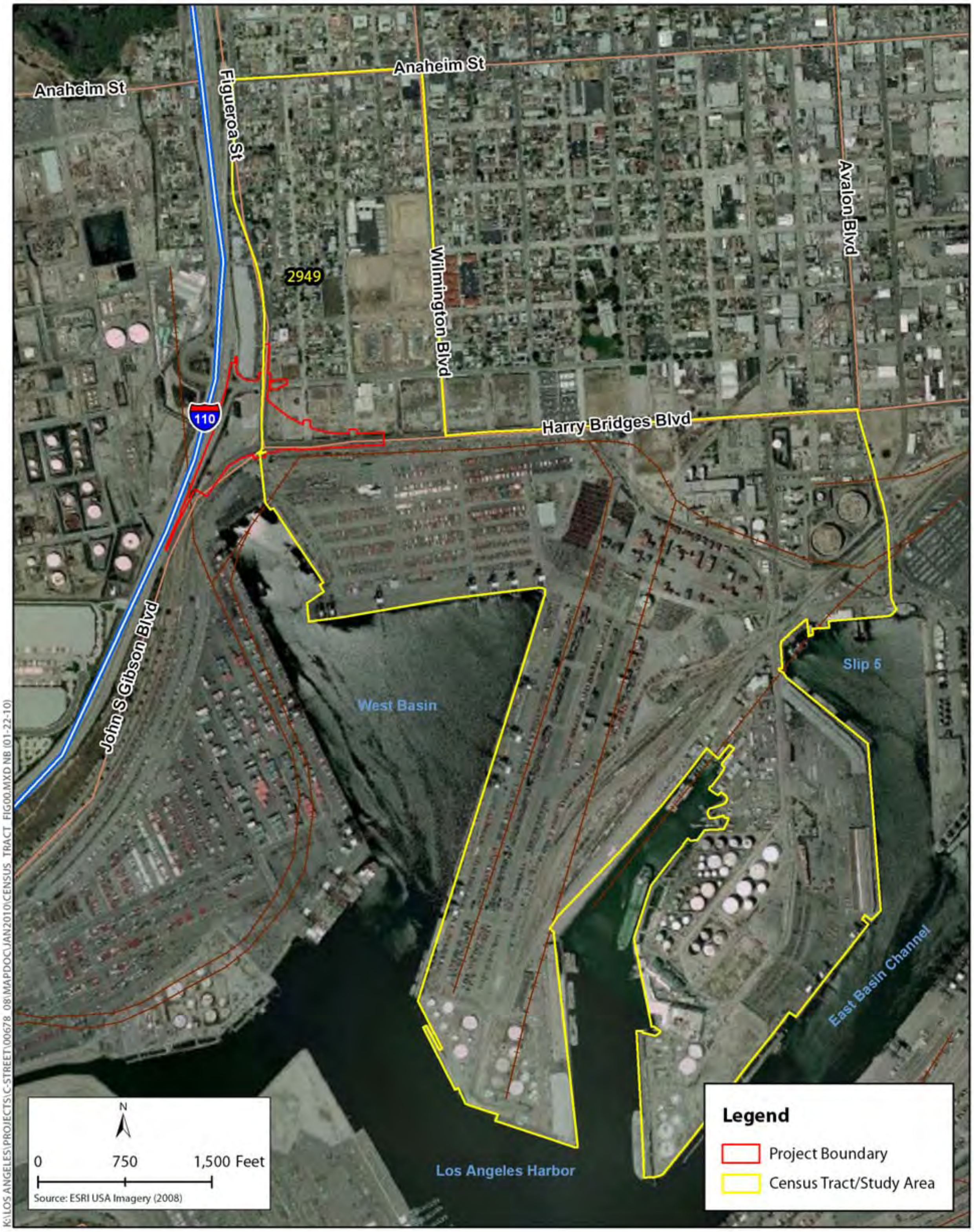
Source: SCAG RTP 2008 Household Projections.

Table 2-4: 2008 SCAG RTP 2005–2035 Employment Projections

Study Area:	2005	2015	% Increase from 2005–2015	2025	% Increase from 2005–2025	2035	% Increase from 2005–2035
County of Los Angeles	4,397,025	4,675,875	6.3%	4,847,436	10.2	5,041,172	14.6
City of Los Angeles	1,764,768	1,864,061	5.6	1,925,148	9.1%	1,994,134	13.0
Tract 2949	1,409	1,465	3.9	1,500	6.5	1,539	9.2

Source: SCAG RTP 2008 Employment Projections.

Figure 2-4: Population Study Area



Recognizing the future growth in port operations, which are projected to triple in cargo throughput by 2020, translating into increased traffic congestion, LAHD has adopted the Port Transportation Management Plan (PTMP), which identifies a series of high-priority transportation infrastructure improvements to enhance traffic flow throughout the study area. The I-110/C Street interchange is one of the projects included in the PTMP.

Development projects that are planned, programmed, under construction, or recently constructed within 2 miles of the proposed alignment are considered in this assessment of the project's effects on growth and listed in Table 2-1 in the Land Use section. There are 36 development projects (see Table 2-1) in different stages of development in the vicinity of the proposed project; given the current growth projections, the existing I-110 ramps/C Street/Figueroa Street intersection is expected to operate at an unacceptable LOS in 2035. Therefore, the need to provide additional freeway access to support expected growth in the City and the study area is becoming crucial.

Environmental Consequences

Construction Impacts

Alternative 1: No-Build Alternative

The No-Build Alternative would not propose any transportation improvements; therefore, the potential for growth does not exist.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Construction activities would be temporary and short-term, lasting approximately 24 months. Therefore, there is no significant potential for population growth or local business impacts during construction from the proposed project.

Operational Impacts

Alternative 1: No-Build Alternative

The pattern and/or rate of existing or planned population or housing growth in the project area would not be affected by the proposed project because no property acquisitions or displacements would occur.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

First-Cut Screening Analysis

The proposed project, in conjunction with other port improvements, is designed to correct existing problems and channel truck traffic directly to and from I-110 and port terminals. This would minimize truck traffic on local residential streets and improve LOS at intersections in the study area. Therefore, the proposed project would accommodate existing growth trends rather than induce new growth. The first-cut screening analysis for the Build Alternative is presented below.

Accessibility

Although the proposed project would relocate the access ramps to I-110 between C Street and Harry Bridges Boulevard, it would not add new ramps or interchanges in an area where none existed previously; thus, the potential for growth due to the provision of new access is low. The proposed project would not affect accessibility to employment or shopping, nor would it attract new businesses and residents. The proposed project would provide some improvement in safety and congestion and would reduce port-related traffic on residential streets. Given the urban and built-out nature of surrounding development, as well as the purpose of the project, the project would not improve accessibility in areas not previously served by a transportation facility. For the reasons stated above, the proposed project is not growth inducing.

Land Use

The project area is built out with industrial and residential uses. The parcels north of Harry Bridges Boulevard and south of C Street have been developed as a green-space buffer. Land uses north of the project area include residential and industrial uses. Land uses in the southern and western portions of the site are generally industrial. The only future planned project in the area is the John S. Gibson Boulevard/I-110 interchange project. This is not indicative of substantial new growth in the area. The pattern and rate of population and housing growth following implementation of the proposed project would be expected to remain consistent with the population anticipated by existing plans for the area. Furthermore, no new or expanded infrastructure, housing, or other similar permanent physical changes to the environment would be necessary as an indirect consequence of the proposed project. However, the 36 projects in the vicinity of the proposed interchange, which are in various stages of development (see Table 2-1), increase the need for the proposed project, which is necessary to correct existing deficiencies in the area and improve traffic flow.

Resources of Concern

Resources of concern can be identified as wetlands, threatened/endangered species, prime farmland, etc. The project traverses an urban and highly disturbed area; it has limited potential to provide habitat to any biological species of concern or affect resources of concern.

Growth-inducing impacts are often secondary impacts resulting from 1) shifts in population growth or distribution, 2) fostering economic growth, or 3) removing obstacles to growth, such as providing access to an area that was previously inaccessible. Therefore, based on the first-cut screening analysis presented above, the proposed project would not be growth inducing nor have growth-related impacts.

No additional analysis related to growth is warranted.

Avoidance, Minimization, and/or Mitigation Measures

Adverse effects under NEPA or significant impacts under CEQA related to growth would not occur as a result of the proposed project. Therefore, no avoidance, minimization, and/or mitigation measures are proposed.

2.1.3 Community Impacts

2.1.3.1 Community Character and Cohesion

Regulatory Setting

The National Environmental Policy Act of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 USC 4331[b][2]). FHWA, in its implementation of NEPA (23 USC 109[h]), directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse effects, such as the destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under CEQA, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then the social or economic change may be considered in determining whether the physical change is significant. Since this proposed project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project’s impacts.

Affected Environment

The area immediately surrounding the project site includes vacant land between C Street and Harry Bridges Boulevard, port facilities, industrial uses, warehouse facilities, and some residential properties. The closest school to the project area is Hawaiian Elementary School, located near the intersection of Hawaiian Avenue and E Street (0.2 mile from the project site). Also, Robert F. Kennedy Head Start is located near the intersection of Figueroa Street and D Street (less than 100 feet from the project site). Businesses in the study area involve predominantly port-related activities. The majority of the commercial businesses in the Wilmington area are concentrated along Anaheim Street and Avalon Boulevard, approximately 0.5 mile north and northeast of the project limits.

Population data were collected from the 2000 census for the County, the City, and the census tract in the study area (i.e., census tract 2949). The study area is intended to encompass an area where population and housing impacts related to construction and operation of the proposed project could reasonably occur. This section provides demographic data for the project study area, the County, and the City.

Existing Regional and Local Population and Housing

Table 2-5 presents the County and City’s population as well as population growth estimates for the population study area (shown in Figure 2-2).

Table 2-5: Population Estimates

Area	1990 Census Population	2000 Census Population	2005 Population	2007 Population Estimates
County of Los Angeles	8,863,164	9,519,338	9,758,886*	9,878,554
City of Los Angeles	3,647,301	3,694,820	3,731,437*	3,834,340
Census Tract 2949	3,217	3,262	3,516**	Not Available

Sources:

U.S. Census Bureau, 1990, 2000, and T1 Population Estimates [10].

* U.S. Census Bureau, 2005 American Community Survey.

**Southern California Association of Governments. 2008a. Regional Transportation Plan.

According to U.S. census records, the population of the City increased by only 1.3 percent between 1990 and 2000. Population increases in the census tracts surrounding the project site were also low.

Table 2-6 presents the regional and local age breakdown, according to 2000 census data.

Table 2-6: Existing Regional and Local Population Characteristics—Age (2000)

Area	Total Population	Age					
		Under 5	%	20 to 64 Years	%	65 Years and Over	%
County of Los Angeles	9,519,338	737,631	7.8	5,645,869	59.3	926,673	9.7
City of Los Angeles	3,694,820	285,976	7.7	2,246,642	60.8	357,129	9.7
Census Tract 2949	3,262	365	11.2	1,616	50.0	163	5.0

Source: U.S. Census Bureau. 2000a. Census 2000, Summary File 1.

Tables 2-7 and 2-8 present regional and local housing occupancy and tenure characteristics. As shown, the percentage of occupied residential units in the County is 95.8, and the occupancy rate in the City is similar. Within the local area, census tract 2949 has occupancy rates that are similar to those of the City as a whole. Census tract 2949 has a much lower percentage of owner-occupied units than the County or the City.

Table 2-7: Existing Regional and Local Housing Characteristics—Occupancy (2000)

Area	Total Units	Occupied	%	Vacant	%	Average Household Size
County of Los Angeles	3,270,909	3,133,744	95.8	137,135	1.2	2.98
City of Los Angeles	1,416,689	1,350,533	95.3	66,156	4.7	2.79
Census Tract 2949	839	815	97.1	24	2.9	3.99

Source: U.S. Census Bureau. 2000. Census 2000, DP-1 Profile of General Demographic Characteristics.

Table 2-8: Existing Regional and Local Housing Characteristics—Tenure (2000)

Area	Total Units	Occupied Units	Owner-Occupied Units	%	Renter-Occupied Units	%
County of Los Angeles	3,270,909	3,133,774	1,499,744	47.9	1,634,030	52.1
City of Los Angeles	1,416,689	1,350,533	522,905	38.7	827,628	61.3
Census Tract 2949	839	815	203	24.9	612	75.1

Source: U.S. Census Bureau. 2000. Census 2000, DP-1 Profile of General Demographic Characteristics.

Environmental Consequences

Construction Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, no construction activities are proposed; consequently, there would be no adverse effects under NEPA or significant impacts under CEQA on the community.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Construction of the proposed project would last approximately 24 months. The Build Alternative would be temporary and could result in short-term construction impacts on the community. Access to school services could be temporarily affected due to reconfigured bus and pedestrian routes. Construction activities could result in temporary, localized, site-specific disruptions for local industrial uses and residences in the project area primarily because of construction-related traffic, partial and/or complete street and lane closures, and increased noise and vibration. However, access to port terminals, industrial facilities and warehouses, and community and public facilities in the area would be maintained during the construction period. A TMP would be prepared to minimize impacts due to reconfigured routes and lane closures. No substantial adverse effects under NEPA or significant impacts under CEQA would occur due to the proposed project.

Operational Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, community character and cohesion would not be affected. Port-related truck traffic would continue to use local streets; there would be no adverse effects under NEPA or significant impacts under CEQA on the community.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

The assessment of whether, and to what extent, the proposed project would adversely affect the cohesiveness of the adjacent community depends largely on whether the proposed project is likely to physically divide the community. Alternative 2 involves the construction of a new interchange, which is intended to reduce traffic congestion. Because I-110, C Street, and Harry Bridges Boulevard are existing roadways and right-of-way has been reserved for the future interchange, no physical division would be created by the proposed project. Alternative 2 would result in a beneficial impact on the community by removing port-related truck traffic from residential streets and improving traffic flow in the area. The proposed project would not physically divide an established community. Therefore, there would be no substantial adverse effects under NEPA or significant impacts under CEQA on community cohesion.

Avoidance, Minimization, and/or Mitigation Measures

The following measure shall be implemented to minimize disruptions to traffic and community access during the construction period:

C-1 The LAHD or its designee shall prepare a TMP to minimize direct and cumulative construction impacts on the community. The TMP shall be developed in consultation with the City of Los Angeles Department of Transportation and Caltrans, and it shall be provided with the construction plan to the City of Los Angeles Police and Fire Departments prior to commencement of construction activities. The TMP shall include, but is not limited to, the following implementation plans:

- *Public Information*: Provide project update to affected residents and businesses, including general public, via brochures and mailers, community meeting, and Web site.
- *Motorist Information*: Provide project information using changeable message signs and ground-mounted signs.
- *Incident Management*: Implement Construction Zone Enhanced Enforcement Program, freeway service patrol, and California Highway Patrol traffic handling.
- *Traffic Management during Construction*: Provide traffic lane closure chart, detour route, pedestrian routes, residential and commercial access routes, and temporary traffic signal during construction.

C-2 The LAHD would continue the public outreach program to keep residents, businesses, and any service providers within the project area informed, and to inform surrounding communities about the project construction schedule, traffic impacted areas and the TMP, and other relevant project information.

2.1.3.2 Environmental Justice

Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President Clinton on February 11, 1994. This executive order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. "Low income" is defined based on the Department of Health and Human Services poverty guidelines. For 2005, this was $19,350 for a family of four, and for 2009, it was $22,050.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans' commitment to upholding the mandates of Title VI is evidenced by its Title VI policy statement, as signed by the director (Appendix C).

Minority Population

Definition: Individual(s) who are American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.

Minority populations occur where either:

(a) The minority population of the affected census tract or block group exceeds 50 percent, or

(b) The minority population percentage of the affected census tract or block group was meaningfully greater than the minority population percentage in the general population.

Low-income Population

Definition: Low-income populations were identified using the annual statistical poverty thresholds from the Bureau of the Census' Current Population Reports, Series P-60, on Income and Poverty.

Low-income populations occur where the percentage of low-income populations in any census tract or block group is more than 10 percentage points greater than the average in the city and/or county in which the census tract block group is located.

Affected Environment

The information below was obtained from the 2000 United States census (Table 2-9). Figure 2-2 shows the study area for the project. The purpose of the data is to identify potential impacts on people living in proximity to the project as well as identify minority and low-income populations in compliance with Executive Order 12898.

The population in census tract 2949 was 3,262 in 2000. Of the census tract's population, Latino/Hispanic was the largest ethnic group, at 87 percent. African American represented the next-largest ethnic group, at 5 percent, and white represented the third-largest ethnic group, at 4 percent.

Table 2-9: Population and Ethnic Distribution

Area	2000 Total Population	White (%)	Hispanic or Latino (%)	Black or African American (%)	American Indian and Alaska Native (%)	Asian (%)	Native Hawaiian and Other Pacific Islander (%)	Some Other Race (%)	Two or more races (%)
County of Los Angeles	9,519,338	2,959,614 (31.1)	4,242,213 (44.6)	901,472 (9.5)	25,609 (0.3)	1,124,569 (11.8)	23,265 (0.2)	19,935 (0.2)	222,661 (2.3)
City of Los Angeles	3,694,820	1,099,188 (29.7)	1,719,073 (46.5)	401,986 (10.9)	8,897 (0.2)	364,850 (9.9)	4,484 (0.1)	9,065 (0.2)	87,277 (2.4)
Census Tract 2949	3,262	142 (4.4)	2,825 (86.6)	170 (5.2)	5 (0.2)	57 (1.7)	33 (1.0)	3 (0.1)	27 (0.8)

Source: U.S. Census Bureau. 2000a. Census 2000, Summary File 1.

As shown in the table below, the percentage of population below the poverty line is much higher in census tract 2949 (41.2 percent) than it is in the County of Los Angeles (17.9 percent) or the City of Los Angeles (22.1 percent). A similar trend is reflected for median household income. The median household income for census tract 2949 is lower than that of the City and County (see Table 2-10).

Table 2-10: Median Household Income

Census Tract/City	1999 Median Household Income	Percentage of Population Below Poverty
County of Los Angeles	$42,189	17.9%
City of Los Angeles	$37,338	22.1%
Census Tract 2949	$20,417	41.2%

Source: U.S. Census Bureau. 2000c. Census 2000.

Based on a comparative analysis of the demographic and income characteristics of the study area with those of the City and County, it is evident that the study area's population is characterized by a substantial proportion of minority and low-income groups. The minority population of the study area exceeds 50 percent, and the percentage of low-income populations in the study area is more than 10 percentage points greater than the average in the City and/or County.

Environmental Consequences

<u>*Construction Impacts*</u>

Alternative 1: No-Build Alternative

Under Alternative 1, the No-Build Alternative, no construction would occur, and minority and low-income populations would not be affected. Therefore, no adverse effects under NEPA or significant impacts under CEQA involving environmental justice would occur.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

The effects of the Build Alternative would occur within an area having a small population that is both minority and low-income. Construction activities would result in occasional traffic delays due to the operation of construction equipment. Elevated noise levels and air pollutant emissions would also occur on a temporary basis as a result of the operation of construction equipment; however, given the results of the noise and air quality analyses performed as part of this environmental document, no impacts on noise and air quality, above the thresholds established by the local agencies having responsibilities over noise and air quality, would occur as a result of construction activities. The community as a whole is likely to be affected by the construction activities, not a particular minority group or economic class. I-110/C Street is an important part of both the local and regional circulation system. Local motorists and pedestrians from the immediate project area, as well as those traveling to and from the project area from elsewhere, would all be affected by traffic delays and other construction-related activities during the project construction period (a TMP would be prepared to prevent unreasonable traffic delays and impacts). All feasible avoidance, minimization, and mitigation measures would be implemented to minimize the adverse effects of the project. Thus, the proposed build alternative would not cause disproportionately high and adverse effects on any minority or low-income populations as per EO 12898 regarding environmental justice during construction.

Operational Impacts

Alternative 1: No-Build Alternative

Under Alternative 1, the No-Build Alternative, no adverse effects under NEPA or significant impacts under CEQA pertaining to the environment would occur, and minority or low-income populations would not be affected. Therefore, no adverse effects or significant impacts would occur.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Alternative 2 would be developed in accordance with Title VI of the Civil Rights Act of 1964, which provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. In addition, the proposed project would be developed in conformity with related statutes and regulations mandating that no person in the State of California shall, on grounds of race, color, sex, age, nation origin, or disabling condition, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity administered by or on the behalf of Caltrans. The proposed project would prove beneficial to the residential and neighborhood portions of the study area by improving traffic flow and providing transportation safety elements through the removal of a large volume of the port-related truck traffic on the residential streets. No relocations or acquisitions would be required under the project alternative. No special needs or affordable housing would be displaced by implementation of Alternative 2. Any project impacts involving environmental justice associated with Alternative 2 would be addressed by proposed avoidance, minimization, and mitigation measures; the measures are expected to be equally effective for all groups.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans has instituted public involvement and community outreach efforts to ensure that issues of concern or controversy to minority and low-income populations are identified and addressed where practicable as part of the project planning and development process. Efforts will continue to be made to ensure meaningful opportunities for public participation. This may include additional community meetings, informational mailings, a project web site, and news releases to local media.

The proposed project will also comply with applicable federal requirements promulgated in accordance with EO 13166, Improving Access to Services for Persons with Limited English Proficiency (August 11, 2000), which requires that federal programs and activities be accessible to persons with limited English language proficiency.

The proposed project will be developed in accordance with Title VI of the Civil Rights Act of 1964, which provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

For a discussion of avoidance, minimization, and mitigation measures that would be implemented to ensure that construction impacts would be minimized, refer to Section 2.2.6, Air Quality; Section 2.1.3.5, Traffic; and Section 2.2.3.6, Noise

2.1.4 Utilities/Emergency Services

Affected Environment

The project area is located within the community of Wilmington, in the City of Los Angeles. The City receives utility and public services from several agencies, as discussed below. John S. Gibson Boulevard and Harry Bridges Boulevard are two major utility corridors within the port.

Utilities

Electricity

Electrical services in the project area are provided by the Los Angeles Department of Water and Power (LADWP). LADWP maintains various generating and distribution substations throughout the greater Los Angeles area, including generating and distribution centers within and near the port that serve the project site. The Harbor generating station is located at the intersection of Island Avenue and Harry Bridges Boulevard. Receiving Station Q and numerous above- and below-ground electrical transmission lines are located in the project area as well. Overall, LADWP supplies nearly 22 billion kilowatt (kW) hours of electricity a year to the City's 1.4 million electric customers.[6]

[6] City of Los Angeles Department of Water and Power. Power Today. Available: <http://www.ladwp.com/ladwp/cms/ladwp001870.jsp>. Accessed: May, 18 2009.

Water

Water services in the project area are provided by LADWP. The 2005 Urban Water Management Plan (UWMP) estimates water demand and supply through a 25-year outlook period and is updated every 5 years by LADWP. In the 2005 UWMP, LADWP forecast that the City of Los Angeles would grow 0.4 percent annually over the next 25 years, or by approximately 368,000 persons. Total citywide demand for water is predicted to be 755,000 acre-feet in 2025 and 766,000 acre-feet in 2030. According to the 2005 UWMP, under wet, average, and dry years throughout the 25-year projection period, LADWP's supply portfolio is expected to be reliable, with adequate supplies available to meet projected demands through 2030.[7] In terms of the location of utility lines, a 12-inch line is located along the east side of Figueroa Street between C Street and Harry Bridges Boulevard, and 6-inch lines are located along most north-south cross streets throughout the project site, including Mar Vista Avenue and Hawaiian Avenue.

All of the water lines contain water service laterals, meters, fire hydrants, and other appurtenances, which is typical for water distribution systems. There is no reclaimed water system in the project area.

Wastewater

The City of Los Angeles Department of Public Works, Bureau of Sanitation, provides wastewater treatment and sewer service to the City. The existing system comprises two treatment plants; two water reclamation plants; a collection system consisting of over 6,500 miles of local, trunk, mainline, and major interceptor sewers; five major outfall sewers; and 48 pumping plants. The sewer infrastructure in the vicinity of the proposed Project includes an active 8-inch and an abandoned 4-inch sewer lines on Harry Bridges Boulevard. There are active 21-inch and an abandoned 12-inch sewer lines on Mar Vista Avenue. These sewage lines feed into double 24-inch lines located in John S. Gibson Boulevard, which discharge into the Terminal Island Treatment Plant (TITP). All of the sewer lines contain sewer laterals and manholes, which is typical for sewer systems.

Stormwater

The City of Los Angeles owns and operates the storm drain system within City ROW, and Caltrans owns and operates storm drains within State ROW. Storm drains are located throughout the project area and maintained by LAHD, the City, and the County. There are two 24-inch storm drains located within John S. Gibson Boulevard ROW. A series of 18-inch to 24-inch storm drain lines and inlets cross I-110 and John S. Gibson Boulevard. Five storm drain lines of various sizes are located within the Figueroa Street ROW.

[7] City of Los Angeles Department of Water and Power. 2005 Urban Water Management Plan.

Solid Waste

Regional planning for solid waste facilities in the area is under the jurisdiction of Los Angeles County, which is the local enforcement agency under integrated waste management laws. The Los Angeles County Sanitation District oversees the operation of landfills that would accept solid waste generated during construction of the proposed project. The County encourages source reduction and recycling objectives that meet or exceed the requirements of State Assembly Bill (AB) 939. AB 939 mandates a 50 percent reduction in waste volumes from 1990 levels by 2010. Nonhazardous and hazardous waste can be landfilled or recycled at several facilities throughout the state. Any hazardous waste generated within the project area is managed in accordance with federal and state requirements. The nearest landfill to the proposed project location is Puente Hills Landfill, which is located at 13130 Crossroads Parkway South in the City of Industry. The newly opened Puente Hills Material Recovery Facility could be used for material recycling purposes. Solid waste collection and disposal services for residential development in the Wilmington area are provided by the City's Bureau of Sanitation.

Natural Gas

The Southern California Gas Company provides natural gas within the project area. John S Gibson Boulevard ROW contains an abandoned 10-inch gas line, an active 8-inch gas line, and an active 12-inch gas line. Figueroa Street ROW contains an active 12-inch gas line, and abandoned 12-inch and 4-inch gas lines. Harry Bridges Boulevard ROW contains an abandoned 4-inch gas line and an active 4-inch gas line.

Telephone, Cable, and Fiber Optics

Multiple telephone, cable, and fiber-optic lines are located in the study area. Time Warner Cable and AT&T have underground telephone and cable conduits throughout the project area. Both companies have underground conduits within State ROW along I-110 that cross under the freeway and run along the shoulder, providing service to Emergency Call Boxes located along the I-110 mainline within the project limits. Four underground conduits (two active and two abandoned) exist within the John S. Gibson Boulevard ROW. Four 4-inch active underground conduits are located along Harry Bridges Boulevard. Active conduits are also located along Figueroa Street and residential streets (Mar Vista Avenue and Hawaiian Avenue) in the project area.

Oil Lines

Several active and abandoned oil lines exist in the project area. The owners of the oil lines include ARCO, Texaco, Conoco Phillips, Union Oil, Kinder Morgan Energy Partners, Mobil Oil, Ultramar, the U.S. Navy, the Golden Eagle Refinery, Chevron, Pacific States Petroleum, Time Oil, etc. Several oil lines lie within the Pacific Harbor Line Railroad and John S. Gibson Boulevard rights-of-way as well as other major rights-of-way within project area, such as Figueroa Street and Harry Bridges Boulevard. Because of the presence of nearby LAHD terminals, several oil lines cross John S Gibson Boulevard and Harry Bridges Boulevard at various locations. Some of these oil lines are active, but many others have been abandoned.

Emergency Services

Police Services

The LAPD Harbor community station is located at 221 N. Bayview Avenue in Wilmington and includes a staff of 300. The harbor area has an officer-to-population ration of 1 officer for every 450 citizens.[8] Average emergency response time for the area is approximately 10.6 minutes.[9] The department-wide response time is 7 minutes.[10] LAPD's level of service and response times in the project area are considered adequate.[11]

Fire Services

LAFD provides fire protection and emergency services for the project site. Fire protection capabilities are based on the distance from the emergency to the nearest fire station and the number of simultaneous emergency or fire-related calls.[12]

LAFD facilities in the vicinity of the project site include land-based fire stations and fireboat companies. The three fire stations in the vicinity of the project area consist of the following:

- Station 38, at 124 East I Street, Wilmington, is a task force station with a staff of nine that maintains a truck and engine company as well as a paramedic ambulance. This would be the primary responding fire station to the proposed project.[13]
- Station 49, at 400 Yacht Street, Berth 194, in Wilmington has a single engine, two boats, and a rescue ambulance. Station 49 is Battalion 6 headquarters. There are 13 staff members at this station. This would be a secondary responding fire station for the proposed project.[14]
- Station 85, at 1331 W. 253rd Street, Harbor City, is a task force station with a paramedic ambulance, urban search and rescue unit, a medical supply trailer, and an emergency lighting trailer.

LAFD's response time in the project area is 5 minutes or less by land. The citywide average response time is approximately 6 to 8 minutes. This response time is considered adequate in the study area.[15]

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[8] Personal communication from C. Plows, officer in charge, Harbor Area community relations. Email on June 11, 2008.
[9] Los Angeles Police Department. About Harbor. Official web site of the LAPD. Available: <http://www.lapdonline.org/harbor_community_police_station/content_basic_view/1709>. Accessed: September 3, 2008.
[10] Los Angeles Community Policing. Police Commission. Current News – 2007. Available: <http://www.lacp.org/commnews-2007.html>. Accessed: August 27, 2008.
[11] Personal communication from C. Plows, officer in charge, harbor area community relations. Email on June 11, 2008.
[12] Personal communication with Chief Lou Roupoli. LAFD, Phone conversation on March 17, 2008.
[13] Ibid.
[14] Ibid.
[15] Ibid.

Environmental Consequences

Construction Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, no construction activities would occur that would result in adverse effects under NEPA or significant impacts under CEQA.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Utilities

Construction of the Build Alternative could result in temporary impacts on utilities, such as an increase in electrical demand or solid waste volumes. Construction activities would use machinery and tools that would consume additional electrical power. However, this increase in electrical usage would be temporary, and the contractor would be able to tap into the existing power grid or generate power on site. Construction activities would not cause a substantial increase in the existing demand for electricity or require the development of new sources. Under the Build Alternative, utility corridors along the existing John S. Gibson Boulevard and Harry Bridges Boulevard alignments would be maintained. However, this would require a longitudinal encroachment permit from Caltrans. Existing overhead utility lines would be relocated. Two 12-inch by 14-foot storm drain structures owned by the Los Angeles County Flood Control District would be avoided by the project during construction; furthermore, the oil, gas, and telephone lines in the project area that are not located under or along the existing Harry Bridges Boulevard alignment would either be protected in place during construction or provided a casing to ensure that no damage would occur. Mitigation Measure U&ES-1, regarding consultation with utility service providers, would ensure that the substantial adverse effects under NEPA or significant impacts under CEQA on utilities would not occur.

Police Service

The temporary closure of lanes or ramps at the I-110/C Street interchange could affect the LAPD harbor community station, the primary responder in the area. The station is located approximately 0.5 mile to the east of the project area and uses C Street to access its service area. The average response time is currently 10.6 minutes. Due to temporary lane closures during construction, it is assumed that response times during this period would be affected. However, alternative routes exist that would provide access to the project area for emergency service providers. Alternative routes north of the project include Wilmington Boulevard and D Street. Furthermore, construction of the proposed project would be conducted in three stages, allowing partial access to the project area at all times. Finally, given that all project-related traffic disruptions would be temporary, lasting only for the period of construction, approximately 24 months, and mitigation measure U&ES-2 for preparation of a TMP would be implemented to minimize adverse effects associated with construction activities, substantial adverse effects under NEPA or significant impacts under CEQA on police services would not occur.

Fire Service

The temporary closure of some lanes in the vicinity could affect LAFD's access to the project area for emergency services. The average response time for the LAFD is currently 5 minutes. Due to temporary lane closures during construction, it is assumed that response times during this period would be affected. However, alternative routes exist that would provide access to the project area for emergency service providers. Alternative routes to the north include Wilmington Boulevard and D Street. Furthermore, construction of the proposed project would be conducted in three stages, allowing for partial access to the project area at all times. Finally, given that all project-related traffic disruptions would be temporary, lasting only for the period of construction, approximately 24 months, and mitigation measure U&ES-2 for preparation of a TMP would be implemented to minimize adverse effects associated with construction activities, substantial adverse effects under NEPA or significant impacts under CEQA on fire services would not occur.

Operational Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, there would be no adverse effects under NEPA or significant impacts under CEQA on utilities or police, fire, or emergency medical services. Existing conditions in the area would not change.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

The proposed Build Alternative is designed to correct current and future deficiencies in the level of service caused by the current roadway configuration. The Build Alternative would provide a safe and efficient configuration for the I-110/C Street interchange and would aid future traffic flow by reducing and managing congestion. The operational impacts of the Build Alternative on utilities as well as access and response times for police, fire, and emergency services in the local project area would be beneficial in the long term.

Avoidance, Minimization, and/or Mitigation Measures

The proposed project would be designed to avoid adverse effects on existing utilities and emergency services. Utilities in the area, other than those currently located under Harry Bridges Boulevard, would be avoided during construction to reduce impacts on utility providers. Should construction need to occur at or near a utility line, the utility line would be protected with a casing to ensure that disruption impacts would not occur. The mitigation measures below would ensure that impacts on utilities and emergency services would be minimized.

U&ES-1 LAHD shall work in close coordination with the utility service providers in advance of construction activities to relocate affected utilities and minimize impacts on consumers.

U&ES-2 LAHD or its designee shall prepare a TMP to minimize direct and cumulative construction impacts on the community, similar to mitigation measures LU-1 and C-1.

2.1.5 Traffic and Transportation/Pedestrian and Bicycle Facilities

Regulatory Setting

Caltrans, as assigned by FHWA, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 CFR 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

Caltrans is committed to carrying out the 1990 Americans with Disabilities Act (ADA) by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

Affected Environment

A traffic operations analysis report (Iteris 2009a) was prepared for the proposed project. The report documented the existing interchange operating conditions and expected future operational conditions for the years 2014 and 2035 with and without the proposed improvements. For each of the conditions, the traffic study area included the freeway mainline, ramps, the weaving segment, and intersections.

The traffic study evaluated existing traffic conditions at two intersections, which are listed below and shown in Figure 2-5:

1. Figueroa Street and I-110 off-ramps/C Street, and
2. Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard

The following operational factors are analyzed in this report for existing (2009), opening-year 2014, and design-year 2035 conditions:

- Intersection LOS,
- Queuing analysis,
- Freeway ramp (merge/diverge) analysis,
- Freeway mainline analysis, and
- Freeway weaving analysis.

Figure 2-5: Study Area and Study Intersections

Source: Traffic Operations Analysis, Iteris, 2009a.

Analysis Methodologies

Intersection Level of Service Analysis

The study intersection, I-110 ramps/C Street and Figueroa Street, is a stop-controlled intersection. The intersection of Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard Street is signalized. The study intersection type and configurations will not change under the no-build conditions. Intersection levels of service were calculated using *Highway Capacity Manual 2000* (HCM 2000) analysis methodologies and Synchro 6 software.

Intersection Queuing Analysis

Intersection queuing analysis was conducted for the signalized intersection to determine queue lengths at turn lanes using Synchro 6 software, which accounts for the 95th percentile queue lengths.[16]

Freeway Ramp (Merge/Diverge) Analysis

Peak-hour ramp volumes were analyzed using the methodology contained in Chapter 13, Freeway Concepts, and Chapter 25, Ramps and Ramp Junctions, of the *Highway Capacity Manual*, with calculations performed using Highway Capacity Software (HCS+, Version 5.21). This analysis examined the levels of service within the ramp influence areas of the freeway. The analysis of the onramps examined the impact of merging onto the freeway, while the analysis of the off-ramps examined the impacts of diverging from the freeway. Consistent with *Highway Capacity Manual* 2000 procedures, a single-lane on-ramp that results in a lane addition was not analyzed as a merge area (HCM 2000). A dual-lane off-ramp that results in a lane drop was analyzed as a major diverge area. Lane additions and major diverge areas were analyzed by means of a capacity analysis at each leg of the lane addition or major diverge area.

Freeway Mainline Analysis

Peak-hour volumes along the freeway mainline were analyzed using the methodology contained in Chapter 13, Freeway Concepts, and Chapter 23, Basic Freeway Segments, of the *Highway Capacity Manual*, with analysis performed using the Highway Capacity Software (HCS+, Version 5.21).

Weaving Analysis

Peak-hour weave segments were analyzed using the methodology contained in Chapter 13, Freeway Concepts, and Chapter 24, Freeway Weaving, of the *Highway Capacity Manual*, with analysis performed using Highway Capacity Software (HCS+, Version 5.21). This analysis examined the levels of service within the weaving segment.

[16] The 95th-percentile queue is defined to be the queue length (in vehicles) that has only a 5 percent probability of being exceeded during the analysis time period. It is a useful parameter for determining the appropriate length of turn pockets.

Level of Service Standards

The LOS parameters and LOS standards used for analyses were as follows:

- Minimum LOS standard for freeways: LOS E, and
- Minimum LOS standard for intersections: LOS D.

Existing (2009) Traffic Conditions

Current Facility

The existing I-110 interchange at C Street is a compact diamond-type interchange. The interchange provides ingress and egress to I-110 from the Figueroa Street and C Street intersection, although C Street has been barricaded with a raised island to prohibit traffic from proceeding eastbound from the interchange. Only westbound right turns are allowed along C Street at this intersection. The existing southbound and northbound off-ramps merge just east of the interchange, resulting in a less-than-standard weaving distance, which tends to reduce the operational efficiency of the interchange. Port traffic traveling southbound on I-110 to the TraPac terminal via the C Street off-ramps is required to make an immediate right onto southbound Figueroa Street before entering the terminal gate at the intersection of Figueroa Street and Harry Bridges Boulevard/John S. Gibson Boulevard.

Existing Traffic Volumes

Existing (2009) traffic volumes for the intersection, freeway ramps, and freeway mainline within the study area were obtained from field data collected over a 3-hour period during the typical weekday peak hours (6:00–9:00 a.m. and 3:00–6:00 p.m.). However, the AM and PM peak hours observed during field data collection for the traffic operations analysis occurred at different times. As a result, the time period with the greatest traffic volume (7:15–8:15 a.m.; 4:30–5:30 p.m.) was selected for all locations of the analysis. Per guidelines from Los Angeles Harbor Department staff, the following conversion factors were used to obtain Passenger Car Equivalents (PCE) volumes for the various truck classifications:

- Bobtail = 1.1,
- Chassis = 2.0,
- Container = 2.0, and
- Other trucks = 2.0.

Table 1-2 of this document presents the existing (2009) peak-hour traffic volumes at the I-110/C Street interchange. Table 2-11 presents the existing (2009) average daily traffic (ADT) and truck ADT for road segments in project area.

Table 2-11: Existing No-Build and Build (2009) Average Daily Traffic and Peak-Hour Traffic at Project Site[17]

Roadway Segment	Total ADT	Truck ADT	% Trucks
NB I-110 south of C Street off-ramp	42,717	4,517	11%
NB I-110 off-ramp to C Street	3,286	140	4%
NB I-110 between C Street on- and off-ramps	39,431	4,377	11%
NB I-110 on-ramp from C Street	5,994	1,888	31%
NB I-110 between C Street on-ramp and Anaheim Street off-ramp	45,425	6,265	14%

Note:

PCE = passenger car equivalents

Source: *Traffic Operations Analysis Report*, Iteris, 2009a.

Level of Service

An LOS analysis using the previously described methodologies was conducted to evaluate existing traffic conditions in the study area. The results of the intersection LOS analysis are summarized in Table 2-12.

Table 2-12: Existing 2009 Intersection Levels of Service

Intersection	AM Peak Hour			PM Peak Hour		
	LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C
Figueroa Street and I-110 Ramps/C Street	B	11.1	0.37	C	15.8	0.75
Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard	A	8.1	0.44	A	7.5	0.45

Notes:

HCM 2000 Operations Methodology.

LOS = level of service, delay = average vehicle delay (seconds), V/C = volume-to-capacity ratio

Source: *Traffic Operations Analysis*, Iteris, 2009a.

An examination of the data in Table 2-12 indicates that the study intersections are currently operating at satisfactory levels of service (LOS C or better during both peak hours).

[17] According to the project traffic engineers, ADT volumes would be the same for the build and no-build condition.

Intersection Queuing Analysis

A queuing analysis using the previously described methodologies was conducted to determine the queue lengths at turn lanes at the intersection of Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard. The results of the queuing analysis are summarized in Table 2-13.

Table 2-13: Existing 2009 Intersection Queue Lengths

Intersection	Movement	Existing Storage (ft)	Existing Scenario AM Peak Hour Queue Length 95th Percentile (ft)	Existing Scenario PM Peak Hour Queue Length 95th Percentile (ft)
Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard	SBL	209	105	84
	EBL	284	49	29
	WBR	97	25	23
	WBL	198	16	27

Notes:
SBL = southbound left, EBL = eastbound left, WBR = westbound right, WBL = westbound left
Source: *Traffic Operations Analysis*, Iteris, 2009a.

As can be seen in Table 2-13, all turn movements at the intersection of Figueroa Street/John S. Gibson Boulevard/Harry Bridges Boulevard have adequate queuing distance during both the AM and PM peak hours.

Freeway Ramp Analysis

Existing AM and PM peak-hour levels of service at the study freeway interchange and adjacent interchange ramp influence areas are summarized in Table 2-14. As Table 2-14 indicates, the freeway ramp junction is currently operating at satisfactory levels of service during both the AM and PM peak hours (LOS C or better). The northbound I-110 on-ramp from C Street is not considered to be a part of a ramp configuration because it is in a weaving configuration and is analyzed as a weaving segment.

Table 2-14: Existing 2009 Freeway Ramp Levels of Service

Freeway Ramp	AM Peak Hour Volume (PCE)	AM Peak Hour Density (pc/mi/ln)	AM Peak Hour LOS	PM Peak Hour Volume (PCE)	PM Peak Hour Density (pc/mi/ln)	PM Peak Hour LOS
Northbound I-110 Off-Ramp to C Street	289	22.9	C	293	16.5	B

Notes:
LOS criteria are provided in the *Highway Capacity Manual* and based on density.
Source: *Traffic Operations Analysis*, Iteris, 2009a.

Freeway Mainline Analysis

Existing AM and PM peak-hour levels of service for the study area freeway segments are summarized in Table 2-15. As Table 2-15 indicates, all the freeway segments in the study area are currently operating at satisfactory levels of service during both the AM and PM peak hours (LOS C or better).

Table 2-15: Existing 2009 Freeway Mainline Levels of Service

Freeway Segment	AM Peak Hour			PM Peak Hour			Average Speed (mph)[1]	
	Volume (PCE)	Density (pc/mi/ln)	LOS	Volume (PCE)	Density (pc/mi/ln)	LOS	AM Peak Hour	PM Peak Hour
Northbound I-110 South of C Street Off-Ramp	4,544	18.4	C	2,989	12.1	B	65	65
Northbound I-110 between C Street Off- and On-Ramps	4,255	17.2	B	2,696	10.9	A	65	65

Notes:
[1] Average passenger-car speed based on HCS output.
LOS criteria are provided in the *Highway Capacity Manual* and based on density.
Source: *Traffic Operations Analysis*, Iteris, 2009a.

Freeway Weave Analysis

Existing AM and PM peak-hour levels of service for the study area freeway weaving segment are summarized in Table 2-16.

Table 2-16: Existing 2009 Freeway Weave-Area Levels of Service

Freeway Segment	AM Peak Hour			PM Peak Hour			Average Speed (mph)[1]	
	Volume (PCE)	Density (pc/mi/ln)	LOS	Volume (PCE)	Density (pc/mi/ln)	LOS	AM Peak Hour	PM Peak Hour
Northbound I-110 between C Street On-Ramps and Anaheim Street Off-Ramps	4,388	16.64	B	2,922	10.9	B	55	60

Notes:
I-110 northbound weaving segment between C Street on-ramp and Anaheim Street off-ramp
[1] Average passenger-car speed based on HCS output.
LOS criteria are provided in the *Highway Capacity Manual* and based on density.
Source: *Traffic Operations Analysis*, Iteris, 2009a.

As Table 2-16 indicates, the freeway weaving segment in the study area is currently operating at satisfactory levels of service during both the AM and PM peak hours (LOS B).

Accident Analysis

Accident data obtained from Caltrans' TASAS Table B for the 3-year period from April 1, 2005, to March 31, 2008, reveal that the accident rate for northbound I-110 within the project limits is less than the statewide average for the similar facilities. The accident rates at the on- and off-ramps at C Street are also less than the average rates. The total number of accidents and the accident rates are summarized in Table 2-17.

Pedestrian and Bicycle Facilities

Under the City of Los Angeles General Plan, John S. Gibson Boulevard is designated to provide Class II bike lanes, and Figueroa Street is designated to provide Class III bike lanes. Currently, a bike lane exists on northbound John S. Gibson Boulevard and Figueroa Street. All the streets in the project area have sidewalks and ramps as well as pedestrian intersection crossings.

Table 2-17: Accident Rates for I-110 Northbound Mainline and Ramps at C Street (Period: 04/01/2005–03/31/2008)

Route Segment	Accident Summary			Actual Accident Rates			Average Accident Rates		
I-110 Northbound Mainline and Ramps at C Street	**Fatalities**	**Injuries and Fatalities**	**Total**	**Fatalities**	**Injuries and Fatalities**	**Total**	**Fatalities**	**Injuries and Fatalities**	**Total**
Northbound mainline (post mile [PM] 2.5/ PM 3.0)	0	8	16	0	0.33	0.66	0.004	0.23	0.72
Northbound on-ramp (PM 2.9)	0	0	1	0	0	0.25	0.003	0.22	0.6
Northbound off-ramp (PM 2.7)	0	0	1	0	0	0.45	0.006	0.33	0.9

Notes: Accident rates listed are per million vehicles (for ramps) and per million vehicle miles (for mainline).

Source: TASAS Table B, Caltrans, District 7, 2009.

Methodology for Future Traffic Forecasts

Future no-build traffic conditions for 2014 and 2035 were estimated by adding traffic due to regional traffic growth and traffic increases resulting from port terminal throughput growth. Local traffic growth was forecast based on a computerized traffic analysis tool known as the Port Area Travel Demand Model, which includes traffic growth for the port and the local area. The Port Travel Demand Model was originally developed for the *Ports of Long Beach and Los Angeles Transportation Study* (2001) and was subsequently revised and updated for several efforts, including the Port of Los Angeles Baseline Transportation Study and the Port of Los Angeles Roadway Study.

Background (Not Project-Related) Traffic Growth

Background traffic growth occurs as a result of regional growth in employment, population, school enrollment, and other factors. To determine the appropriate growth rates, growth in non-port trips was determined using data from the SCAG Regional Travel Demand Forecasting Model. Other local projects were not included in the SCAG regional model and were thus accounted for separately in the Port Travel Demand Model. Although not included in the SCAG regional model, projects such as the San Pedro Waterfront Project and the Wilmington Waterfront and Promenade Project were added to the Port Travel Demand Model. All projected Port of Long Beach and Port of Los Angeles container and non-container terminal traffic growth was included in the Port Travel Demand Model. The background future traffic volumes were developed based on SCAG socioeconomic projections for 2014 and 2035.

Ports of Los Angeles and Long Beach Trip Generation

Future trip generation at the Ports of Los Angeles and Long Beach for 2014 and 2035 was estimated by adding traffic resulting from terminal expansion and associated throughput growth. Port-related trip generation was developed using LAHD's QuickTrip truck trip generation model. The QuickTrip spreadsheet model was developed for the *Ports of Long Beach and Los Angeles Transportation Study*, which estimates terminal truck flow by hour of the day. The QuickTrip model was run and tested against the gate data, consisting of gate counts and historical gate data from the terminals. The data were input into QuickTrip for each terminal. QuickTrip was validated by comparing estimates of gate activity with actual gate counts conducted in the field. The results of the validation exercise show that the QuickTrip model was able to estimate truck movements by day and peak hour within 2 to 10 percent of actual counts for all terminals combined. Table 2-18 and Table 2-19 show ambient peak-hour trips (PCE) associated with the port and adjacent areas.

Table 2-18: 2014 Port-Area Trip Generation

	AM Peak Hour	PM Peak Hour	Daily
Trucks (PCE)	6,826	9,469	165,547
Autos	1,930	2,183	26,646
Total	8,756	11,652	192,192
*The data were obtained from the Ports of Los Angeles and Long Beach Throughput and Trip Generation Model for Existing Terminals (QuickTrip).			

Table 2-19: 2035 Port-Area Trip Generation

	AM Peak Hour	PM Peak Hour	Daily
Trucks (PCE)	35,071	37,303	160,499
Autos	7,338	11,262	28,530
Total	42,409	48,565	189,029
*The data were obtained from the Ports of Los Angeles and Long Beach Throughput and Trip Generation Model for Existing Terminals (QuickTrip).			

Build-Condition Traffic Flow

For build conditions, the raw 2009, 2014, and 2035 model volumes at the future Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard and John S. Gibson Boulevard and I-110 ramps/Yang Ming driveway intersections were manually adjusted to reflect existing and revised future traffic patterns. Adjustments were made to the AM and PM peak periods for the southbound through traffic volumes at the future John S. Gibson Boulevard/Figueroa Street and Harry Bridges Boulevard/I-110 ramps signalized intersection.

Environmental Consequences

Construction Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, there would be no construction impacts on traffic and transportation because no construction activities would occur.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

During project construction, temporary impacts could affect fire protection agencies, law enforcement agencies, and emergency services. For example, the Harbor police station could be affected by widening along I-110 and other construction activities. The impacts would include traffic delays caused by the operation of construction equipment and partial lane closures on an occasional basis.

Construction of the build alternative could require temporary and intermittent lane or ramp closures, which could increase congestion and diminish access in the area. Access would be maintained to the TraPac terminal during construction period. As part of mitigation measure TR-1, a TMP would be developed to minimize the impact of construction activities on traffic flow. Signage would be put at optimal locations to notify motorists about the detours in advance. No road closures are anticipated during peak periods, and because the impacts would be temporary and limited to the construction period, which is approximately 24 months, the effects would not be substantially adverse under NEPA, or there would be no significant impacts under CEQA (see mitigation measures LU-1, C-1, and TR-1).

Operational Impacts

Impacts were assessed by quantifying differences between future no-build conditions and build conditions.

Alternative 1: No-Build Alternative

No-Build 2014 Traffic Conditions

Table 2-20 of this document shows future no-build and build traffic volumes for the project study area for 2014. The increased traffic on the ramps is attributable to expected growth at port facilities.

Table 2-20: Future No-Build and Build (2014) Average Daily Traffic at Project Site[18]

Roadway Segment	Total ADT	Truck ADT	% Trucks
NB I-110 south of C Street off-ramp	49,043	8,373	17%
NB I-110 off-ramp to C Street	4,449	584	13%
NB I-110 between C Street on- and off-ramps	44,595	7,788	17%
NB I-110 on-ramp from C Street	6,525	2,230	34%
NB I-110 between C Street on-ramp and Anaheim Street off-ramp	51,120	10,018	20%

Source: *Traffic Operations Analysis Report*, Iteris, 2009a.

Intersection Levels of Service

An analysis was conducted to evaluate no-build 2014 traffic conditions in the study area. The results of the intersection level of service analysis are summarized in Table 2-21. An examination of the data in Table 2-21 indicates that the Figueroa Street and I-110 ramps/C Street intersection is anticipated to operate at LOS F during the peak hours. The Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard intersection would operate at acceptable LOS during the peak hours (LOS B).

Table 2-21: No-Build 2014 Intersection Levels of Service

Intersection	AM Peak Hour			PM Peak Hour		
	LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C
Figueroa Street and I-110 Ramps/C Street	F	122.5	1.745	F	243.6	2.438
Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard	B	17.9	0.70	B	19.0	0.76

Notes:

HCM 2000 Operations Methodology.

LOS = level of service, delay = average vehicle delay (seconds), V/C = volume-to-capacity ratio

Source: *Traffic Operations Analysis*, Iteris, 2009a.

Intersection Queuing Analysis

A queuing analysis using the previously described methodologies was conducted to determine the queue lengths at the turn lanes at the Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard intersection. The results of the queuing analysis are summarized in Table 2-22.

[18] According to the project traffic engineers, ADT volumes are the same for the build and no-build conditions.

As can be seen in Table 2-22, the southbound left-turn movement at the intersection of Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard has an inadequate queuing distance during both the AM and PM peak hours.

Table 2-22: No-Build 2014 Intersection Queue Lengths

Intersection	Movement	Existing Storage (ft)	No-Build 2014 AM Peak Hour Queue Length 95th Percentile (ft)	No-Build 2014 PM Peak Hour Queue Length 95th Percentile (ft)
Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard	SBL	209	458 [1]	506 [1]
	EBL	284	33	46
	WBR	97	54	67

Notes:

[1] 95th percentile volume exceeds capacity; queue may be longer.

SBL = southbound left, EBL = eastbound left, WBR = westbound right

Source: *Traffic Operations Analysis*, Iteris, 2009a.

Freeway Ramp Analysis

Levels of service for the freeway ramps for the no-build 2014 scenario during the AM and PM peak hour are summarized in Table 2-23. As Table 2-23 indicates, the freeway ramp will continue to operate at satisfactory levels of service during both the AM and PM peak hours. The northbound I-110 on-ramp from C Street is not considered to be a part of a ramp configuration because it is in a weaving configuration and analyzed as a weaving segment.

Table 2-23: 2014 Freeway Ramp Level of Service[19]

Roadway Segment	AM Peak Hour Volume (PCE)	AM Peak Hour Density (pc/mi/ln)	AM Peak Hour LOS	PM Peak Hour Volume (PCE)	PM Peak Hour Density (pc/mi/ln)	PM Peak Hour LOS
Northbound I-110 Off-Ramp to C Street	307	24.3	C	347	20.7	C

Notes:

LOS criteria are provided in the *Highway Capacity Manual* and based on density.

Source: *Traffic Operations Analysis*, Iteris, 2009a.

Freeway Mainline Analysis

Freeway mainline levels of service in the no-build 2014 scenario during the AM and PM peak hour at the study area freeway segments are summarized in Table 2-24. As Table 2-24 indicates, all the freeway segments in the study area continue to operate at satisfactory levels of service during both the AM and PM peak hours.

[19] The freeway ramp level of service is the same for the build and no-build scenarios.

Table 2-24: 2014 Freeway Mainline Levels of Service[20]

Roadway Segment	AM Peak Hour			PM Peak Hour			HCM Average Speed (mph)[1]	
	Volume (PCE)	Density (pc/mi/ln)	LOS	Volume (PCE)	Density (pc/mi/ln)	LOS	AM Peak Hour	PM Peak Hour
Northbound I-110 South of C Street Off-Ramp	5,151	20.9	C	4,165	16.9	B	65	65
Northbound I-110 between C Street Off- and On-Ramps	4,844	19.6	C	3,818	15.5	B	65	65

Notes:

[1] Average passenger-car speed based on HCS output

LOS criteria provided in the *Highway Capacity Manual* and based on density.

Source: *Traffic Operations Analysis*, Iteris, 2009a.

Freeway Weave Analysis

The no-build 2014 AM and PM peak-hour levels of service for the study area freeway weaving segment are summarized in Table 2-25. As Table 2-25 indicates, the freeway weaving segment in the study area continues to operate at satisfactory levels of service during both the AM and PM peak hours (LOS C).

Table 2-25: 2014 Freeway Weave-Area Level of Service[21]

Roadway Segment	AM Peak Hour			PM Peak Hour			HCM Average Speed (mph)[1]	
	Volume (PCE)	Density (pc/mi/ln)	LOS	Volume (PCE)	Density (pc/mi/ln)	LOS	AM Peak Hour	PM Peak Hour
Northbound I-110 between C Street On-Ramp and Anaheim Street Off-Ramp	5,380	21.98	C	4,679	24.38	C	55	50

Notes:

[1] Average passenger-car speed based on HCS output

LOS criteria are provided in the *Highway Capacity Manual* and based on density.

Source: *Traffic Operations Analysis*, Iteris, 2009a.

[20] The freeway mainline level of service is the same for the build and no-build scenarios.
[21] The freeway weave-area level of service is the same for the build and no-build scenarios.

No-Build 2035 Traffic Conditions

Table 2-26 of this document shows future no-build and build traffic volumes for the project study area for 2035. The increased traffic on the ramps is attributable to expected growth at port facilities.

Table 2-26: Future No-Build and Build (2035) Average Daily Traffic at Project Site[22]

Roadway Segment	Total ADT	Truck ADT	% Trucks
NB I-110 south of C Street off-ramp	61,578	10,447	17%
NB I-110 off-ramp to C Street	5,100	506	10%
NB I-110 between C Street on- and off-ramps	56,478	9,941	18%
NB I-110 on-ramp from C Street	6,510	2,2981	35%
NB I-110 between C Street on-ramp and Anaheim Street off-ramp	62,989	12,240	19%

Source: *Traffic Operations Analysis Report*, Iteris, 2009a.

Intersection Levels of Service

A levels of service analysis using the previously described methodologies was conducted to evaluate no-build 2035 traffic conditions in the study area. The results of the intersection level of service analysis are summarized in Table 2-27. An examination of the data in Table 2-27 indicates that the Figueroa Street and I-110 ramps/C Street intersection is anticipated to operate at LOS F during the peak hours. Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard will operate at an acceptable LOS C during the peak hours.

Table 2-27: No-Build 2035 Intersection Levels of Service

Intersection	AM Peak Hour			PM Peak Hour		
	LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C
Figueroa Street and I-110 Ramps/C Street	F	165.1	1.919	F	280.0	2.778
Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard	C	21.5	0.80	C	22.8	0.92

Notes:

HCM 2000 Operations Methodology.

LOS = level of service, delay = average vehicle delay (seconds), V/C = volume-to-capacity ratio

Source: *Traffic Operations Analysis*, Iteris, 2009a.

[22] According to the project traffic engineers, ADT volumes are the same for the build and no-build conditions.

Intersection Queuing Analysis

A queuing analysis using the previously described methodologies was conducted to determine the queue lengths at the turn lanes at the Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard intersection. The results of the queuing analysis for no-build 2035 conditions are summarized in Table 2-28.

As can be seen in Table 2-28, the southbound left-turn movement at the intersection of Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard has an inadequate queuing distance during both the AM and PM peak hours.

Table 2-28: No-Build 2035 Intersection Queue Lengths

Intersection	Movement	Existing Storage (ft)	No-Build 2035	
			AM Peak Hour	PM Peak Hour
			Queue Length 95th Percentile (ft)	Queue Length 95th Percentile (ft)
Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard	SBL	209	584[1]	585[1]
	EBL	284	88[1]	135[1]
	WBR	97	64	85

Notes:
[1] 95th percentile volume exceeds capacity; queue may be longer.
SBL = southbound left, EBL = eastbound left, WBR = westbound right
Source: *Traffic Operations Analysis*, Iteris, 2009a.

Freeway Ramp Analysis

Levels of service for the freeway ramps for the no-build 2035 scenario during the AM and PM peak hour are summarized in Table 2-29. As Table 2-29 indicates, the freeway ramp will continue to operate at satisfactory levels of service during both the AM and PM peak hours. The northbound I-110 on-ramp from C Street is not considered to be a part of a ramp configuration because it is in a weaving configuration and is analyzed as a weaving segment.

Table 2-29: 2035 Freeway Ramp Level of Service[23]

Roadway Segment	AM Peak Hour			PM Peak Hour		
	Volume (PCE)	Density (pc/mi/ln)	LOS	Volume (PCE)	Density (pc/mi/ln)	LOS
Northbound I-110 Off-Ramp to C Street	355	26.4	C	385	24.6	C

Notes:
LOS criteria are provided in the *Highway Capacity Manual* and based on density.
Source: *Traffic Operations Analysis*, Iteris, 2009a.

[23] The freeway ramp level of service is the same for the build and no-build scenarios.

Freeway Mainline Analysis

Freeway mainline levels of service in the no-build 2035 scenario during the AM and PM peak hours at the study area freeway segments are summarized in Table 2-30. As Table 2-30 indicates, all the freeway segments in the study area continue to operate at satisfactory levels of service during both the AM and PM peak hours.

Table 2-30: 2035 Freeway Mainline Levels of Service[24]

Roadway Segment	AM Peak Hour			PM Peak Hour			HCM Average Speed (mph)[1]	
	Volume (PCE)	Density (pc/mi/ln)	LOS	Volume (PCE)	Density (pc/mi/ln)	LOS	AM Peak Hour	PM Peak Hour
Northbound I-110 South of C Street Off-Ramp	5,617	22.5	C	5,115	20.7	C	65	65
Northbound I-110 between C Street Off- and On-Ramps	5,262	21.3	C	4,731	19.2	C	65	65

Notes:
[1] Average passenger-car speed based on HCS output
LOS criteria are provided in the *Highway Capacity Manual* and based on density.
Source: *Traffic Operations Analysis*, Iteris, 2009a.

Freeway Weave Analysis

No-build 2035 AM and PM peak-hour levels of service for the study area freeway weaving segment are summarized in Table 2-31 (on the next page). As Table 2-31 indicates, the freeway weaving segment in the study area continues to operate at satisfactory levels of service during both the AM and PM peak hours (LOS C).

Table 2-31: 2035 Freeway Weave-Area Level of Service[25]

Roadway Segment	AM Peak Hour			PM Peak Hour			HCM Average Speed (mph)[1]	
	Volume (PCE)	Density (pc/mi/ln)	LOS	Volume (PCE)	Density (pc/mi/ln)	LOS	AM Peak Hour	PM Peak Hour
Northbound I-110 between C Street On-Ramp and Anaheim Street Off-Ramp	5,844	25.45	C	5,463	23.88	C	50	50

Notes [Table 2-31]:
[1] Average passenger-car speed based on HCS output
LOS criteria are provided in the *Highway Capacity Manual* and based on density.
Source: *Traffic Operations Analysis*, Iteris, 2009a.

[24] The freeway mainline level of service is the same for the build and no-build scenarios.
[25] The freeway weaving segment level of service is the same for the build and no-build scenarios.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Build 2014 Traffic Conditions

Table 2-20 of this document shows future no-build and build traffic volumes for the project study area for 2014. The increased traffic on the ramps is attributable to expected growth at port facilities. This section summarizes future traffic operations and conditions in 2014 after the proposed interchange improvements are constructed.

Intersection Levels of Service

An analysis was conducted to evaluate build 2014 traffic conditions in the study area. The results of the intersection level of service analysis are summarized in Table 2-32. An examination of the data in Table 2-32 indicates that the study intersection is anticipated to operate at satisfactory levels of service (LOS C or better).

Table 2-32: Build 2014 Intersection Levels of Service

Intersection	AM Peak Hour			PM Peak Hour		
	LOS	Delay (Sec)	V/C	LOS	Delay (Sec)	V/C
Figueroa Street/John S. Gibson Boulevard and I-110 Ramps/Harry Bridges Boulevard	B	18.5	0.50	C	20.4	0.58

Notes:

HCM 2000 Operations Methodology.

LOS = level of service, delay = average vehicle delay (seconds), V/C = volume-to-capacity ratio

Source: *Traffic Operations Analysis*, Iteris, 2009a.

Intersection Queuing Analysis

A queuing analysis using the previously described methodologies was conducted to determine the queue lengths at the turn lanes at the Figueroa Street/John S. Gibson Boulevard and Harry Bridges Boulevard/I-110 ramps intersection. The results of the queuing analysis are summarized in Table 2-33.

As can be seen in Table 2-33, the 95th percentile queue length for the westbound left-turn is approximately 250 feet at the intersection of Figueroa Street/John S. Gibson Boulevard/Harry Bridges Boulevard.

Freeway Ramp Analysis

There would be no change in freeway ramp levels of service between the build 2014 scenario and no-build 2014 scenario during the AM and PM peak hour. Please see Table 2-23 for the summarized results.

Table 2-33: Build 2014 Intersection Queue Lengths

Intersection	Movement	AM Peak Hour Queue Length 95th Percentile (ft)	PM Peak Hour Queue Length 95th Percentile (ft)
Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard	SBL	64	100
	NBR	45	46
	NBL	0 [1]	0 [1]
	EBR	0 [1]	0 [1]
	EBL	39	73
	WBR	22	19
	WBL	191	247 [2]

Notes:

[1] Values not reported by Synchro.

[2] 95th percentile volume exceeds capacity; queue may be longer.

SBL = southbound left, NBR = northbound right, NBL = northbound left, EBR = eastbound right, EBL = eastbound left, WBR = westbound right, WBL = westbound left, SBL = southbound left

Source: *Traffic Operations Analysis*, Iteris, 2009a.

Freeway Mainline Analysis

There would be no change in freeway mainline levels of service between the build 2014 scenario and no-build 2014 scenario during the AM and PM peak hour. Please see Table 2-24 for the summarized results.

Freeway Weave Analysis

There would be no change in freeway weaving segment levels of service between the build 2014 scenario and no-build 2014 scenario during the AM and PM peak hour. Please see Table 2-25 for the summarized results.

Build 2035 Traffic Conditions

Table 2-26 of this document shows future no-build and build traffic volumes for the project study area for 2035. The increased traffic on the ramps is attributable to expected growth at port facilities. This section summarizes future traffic operations and conditions in 2035 after the proposed interchange improvements are constructed.

Intersection Levels of Service

A level of service analysis using the previously described methodologies was conducted to evaluate build 2035 traffic conditions in the study area. The results of the intersection level of service analysis are summarized in Table 2-34. An examination of the data in Table 2-34 indicates that the study intersection is anticipated to operate at satisfactory levels of service (LOS C or better during the AM and PM peak hours).

Table 2-34: Build 2035 Intersection Levels of Service

Intersection	AM Peak Hour			PM Peak Hour		
	LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C
Figueroa Street/John S. Gibson Boulevard and I-110 Ramps/Harry Bridges Boulevard	C	20.5	0.59	C	24.4	0.59

Notes:

HCM 2000 Operations Methodology.

LOS = level of service, delay = average vehicle delay (seconds), V/C = volume-to-capacity ratio

Source: *Traffic Operations Analysis*, Iteris, 2009a.

Intersection Queuing Analysis

A queuing analysis using the previously described methodologies was conducted to determine the queue lengths at the turn lanes at the Figueroa Street/John S. Gibson Boulevard/Harry Bridges Boulevard intersection. The results of the queuing analysis are summarized in Table 2-35.

As can be seen in Table 2-35, the westbound left-turn 95th percentile queue length is approximately 308 feet at the intersection of Figueroa Street/John S. Gibson Boulevard/Harry Bridges Boulevard during the PM peak hour.

Table 2-35: Build 2035 Intersection Queue Lengths

Intersection	Movement	AM Peak Hour Queue Length 95th Percentile (ft)	PM Peak Hour Queue Length 95th Percentile (ft)	Recommended Storage (ft)
Figueroa Street and John S. Gibson Boulevard/Harry Bridges Boulevard	SBL	105	139	150
	NBR	57	59	100
	NBL	11	0 [1]	100
	EBR	0	0	100
	EBL	55 [2]	110	125
	WBR	19	22	100
	WBL	255 [2]	308	325

Notes [Table 2-35]:
[1] Values not reported by Synchro.
[2] 95th percentile volume exceeds capacity; queue may be longer.
SBL = southbound left, NBR = northbound right, NBL = northbound left, EBR = eastbound right, EBL = eastbound left, WBR = westbound right, WBL = westbound left, SBL = southbound left
Source: *Traffic Operations Analysis*, Iteris, 2009a.

Freeway Ramp Analysis

There would be no change in freeway ramp levels of service between the build 2035 scenario and no-build 2035 scenario during the AM and PM peak hour. Please see Table 2-29 for the summarized results.

Freeway Mainline Analysis

There would be no change in freeway mainline levels of service between the build 2035 scenario and no-build 2035 scenario during the AM and PM peak hour. Please see Table 2-30 for the summarized results.

Freeway Weave Analysis

There would be no change in freeway weaving segment levels of service between the build 2035 scenario and no-build 2035 scenario during the AM and PM peak hour. Please see Table 2-31 for the summarized results.

The improvements constructed under the proposed project would result in improvement in intersection LOS and intersection queuing condition in the build scenario in 2014 and 2035. The freeway operations (ramps, mainline, and weaving segment LOS) would not differ under the build and no-build scenarios. Thus, there would be no adverse effect under NEPA or significant impact under CEQA on traffic as a result of the proposed project.

Pedestrian and Bicycle Facilities

The proposed improvements would accommodate the existing bike lane classifications on John S. Gibson Boulevard and Figueroa Street and would include 8-foot shoulders. The proposed project also includes curb, gutter, and sidewalk improvements on Mar Vista Avenue and Hawaiian Avenue, just north of Harry Bridges Boulevard. Concrete sidewalks are proposed along the local roadways to provide a clear and unobstructed path for pedestrian travel within the project limits. Curb ramps would be constructed at intersection and street crossings to ensure that the facilities would be in compliance with ADA requirements. Pedestrian signals and crosswalk pavement delineation would also be provided. Thus, there would be no adverse effect under NEPA or significant impact under CEQA on pedestrian and bicycle facilities as a result of the proposed project.

Avoidance, Minimization, and/or Mitigation Measures

A TMP would be prepared and implemented to minimize impacts on traffic and pedestrian safety during project construction.

TR-1 LAHD or its designee shall prepare a TMP to minimize direct and cumulative construction impacts on the community. The TMP shall be developed in consultation with the Los Angeles Department of Transportation and the

California Department of Transportation, and it shall be provided with the construction plan to the City of Los Angeles Police Department and the City of Los Angeles Fire Department prior to commencement of construction activities. The TMP shall include the following implementation plans:

- *Public Information*: Provide project updates to affected residents and businesses, including the general public, via brochures and mailers, community meetings, and web site information;
- *Motorist Information*: Provide project information using changeable message signs and ground-mounted signs;
- *Incident Management*: Implement Construction Zone Enhanced Enforcement Program, freeway service patrol, and California Highway Patrol traffic handling; and
- *Traffic Management during Construction*: Provide a traffic lane closure chart, detour routes, pedestrian routes, residential and commercial access routes, and temporary traffic signals during construction.

2.1.6 Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 USC 4331[b][2]). To further emphasize the point, FHWA in its implementation of NEPA (23 USC 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest, taking into account adverse environmental impacts, including, among others items, the destruction or disruption of aesthetic values.

Likewise, CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state “with…enjoyment of *aesthetic,* natural, scenic and historic environmental qualities” (California Public Resources Code Section 21001[b]).

Affected Environment

The proposed I-110/C Street interchange is located within an existing transportation corridor surrounded by fully built port facilities, light industrial facilities, and a residential neighborhood. The topography of the project area is flat, with no mature trees or landscape vegetation in the project vicinity.

Views from the residential neighborhood on Figueroa Street include roads and housing to the north, I-110, smoke stacks of industries west of I-110, warehouses and other light manufacturing uses to the west, port-related facilities, vacant land, transportation infrastructure to the south, and roads and residences to the east. No pertinent visual resources appear within the project viewshed except for the Vincent Thomas Bridge (eligible for listing in National Register of Historic Places), which is located approximately 1.5 miles southeast of the project site. The first row of residents along the north side of C Street east of Figueroa Street could possibly see the Vincent Thomas Bridge in the distance because it is in their line of sight. The planned green space may become a future visual resource for the community. I-110 has been designated a local scenic highway south of Harry Bridges Boulevard (see Map E of the Transportation Element of the City of Los Angeles General Plan, 1999).

The sensitive viewer groups in the vicinity include those who reside in the single-family residences along Figueroa Street, users of the green space between C Street and Harry Bridges Boulevard, and motorists along I-110. Motorists on local streets could have some views of the Vincent Thomas Bridge from C Street, but motorists have low sensitivity to changes in views. Other viewer groups include workers in the light manufacturing and port-related facilities. However, these workers are not considered as having high sensitivity to changes in views.

Environmental Consequences

Construction Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, no construction work is proposed. Therefore, no substantial adverse effects under NEPA or significant impacts under CEQA on the existing visual setting and aesthetic conditions would occur.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Temporary minor visual impacts may result from construction activities (e.g., staging/stockpiling road-building materials, operating construction equipment, erecting temporary traffic barricades) taking place in the project area and vicinity. Construction hours are not expected to extend into the night; therefore, the use of lights would be minimal. If lights are used, an adequate buffer would be provided to prevent nighttime light spillover effects on adjacent or nearby sensitive viewer groups. Visible activities would include routine construction activities and truck deliveries. These activities would be visible from residential areas located north of C Street. Nonetheless, these visual impacts would be limited to the period of construction. The presence of construction personnel and equipment would be temporary and short term. Due to the temporary nature of the impacts, the loss of visual quality during construction is not considered substantial; therefore, no adverse effects under NEPA or significant impacts under CEQA would occur.

Operational Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, no changes to the existing interchange would occur. Therefore, there would be no adverse effects under NEPA or significant impacts under CEQA on the existing visual setting and aesthetic conditions.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

The proposed I-110/C Street interchange modifications would take place mostly within the existing right-of-way of the state and the City, with some slight shifting of Harry Bridges Boulevard near Figueroa Street to the north. Most of the construction would be on the existing grades, with the exception of the elevated overpass, which would be approximately 30-feet above ground level, connecting the northbound I-110 off-ramp with eastbound Harry Bridges Boulevard. Since the proposed overpass would be located southwest of the first-row residences north of C Street and future green space users, it is not likely that it would block views of the Vincent Thomas Bridge. No visual effects on any group of viewers, including residents north of C Street, future green space users, and motorists using I-110 and local roadways, are anticipated for the Build Alternative. Most views for sensitive viewers would not be adversely affected. The project would provide planting on embankment slopes within the state right-of-way. Landscaping would be provided along local roadways in accordance with the requirements of local jurisdictions. The proposed project would be consistent with the urban nature of the existing visual settings. The proposed project would comply with Caltrans design guidelines to minimize impacts (design guidelines applicable to proposed project are outlined under mitigation measures VIS-1 to VIS-4). Thus, no adverse effects under NEPA or significant impacts under CEQA would occur.

Avoidance, Minimization, and/or Mitigation Measures

Even though no adverse effects under NEPA or significant impacts under CEQA on visual resources are anticipated under the proposed project, the minimization measures discussed below would ensure that any impacts on visual resources would be minimized.

VIS-1 Develop Context-Sensitive Solutions for the aesthetic and landscape treatments of the project elements based on the Caltrans Aesthetic and Landscape Master Plan.

VIS-2 Utilize drainage and water quality elements, where required, that maximize the allowable landscape. Place any water quality or detention ponds out of clear view of the interchange and the highway.

VIS-3 Use a visually compatible ornamental groundcover in any detention/water quality basins or geoswales that are located within ornamental landscape areas.

VIS-4 Landscape and revegetate disturbed areas to the greatest extent feasible. Landscaping should include appropriate irrigation, establishment, and maintenance to assure ongoing success of the plantings.

2.1.7 Cultural Resources

The information presented in this section is based on the January 2010 *Historic Resources Evaluation Report* (ICF International 2010a) and the January 2010 *Historic Property Survey Report* (ICF International 2010b) that were prepared for this project, which is incorporated by reference.

Regulatory Setting

"Cultural resources" as used in this document refers to all "built environment" resources (structures, bridges, railroads, water conveyance systems, etc.), culturally important resources, and archaeological resources (both prehistoric and historic), regardless of significance. Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act of 1966, as amended, (NHPA) sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and Caltrans went into effect for Caltrans projects, both state and local, with FHWA involvement. The PA implements the Advisory Council's regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The FHWA's responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Pilot Program (23 CFR 327) (July 1, 2007).

The Archaeological Resources Protection Act (ARPA) applies when a project may involve archaeological resources located on federal or tribal land. ARPA requires that a permit be obtained before excavation of an archaeological resource on such land can take place.

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the "use" of land from historic properties. See Appendix B for specific information regarding Section 4(f).

Historical resources are considered under CEQA, as well as California Public Resources Code Section 5024.1, which establishes the California Register of Historical Resources. Public Resources Code Section 5024 requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the SHPO before altering, transferring, relocating, or demolishing state-owned historical resources that are listed or eligible for inclusion in the National Register of Historic Places or are registered or eligible for registration as California Historical Landmarks.

Affected Environment

Methodology

Prior to the built environment and archaeological field investigations of the area of potential effects (APE), a literature and records search was conducted at the South Central Coastal Information Center at California State University, Fullerton on January 8, 2009. The search included a review of all recorded cultural sites within a 0.5-mile radius of the project area as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest, the California Historical Landmarks, the California Register of Historical Resources, the National Register of Historic Places, and the California State Historic Resources Inventory were reviewed. Historic maps, Sanborn fire insurance maps, and U.S. Geological Survey (USGS) quadrangles were inspected as well. Figures 2-6a through 2-6c show the APE for the project.

A letter was sent to the NAHC on January 23, 2009, requesting a review of the sacred lands file as well as a list of Native American representatives who could be contacted for information regarding sacred sites within the project area (see Attachment H of the *Archaeological Survey Rep*ort).

According to the NAHC response dated January 26, 2009, no known sacred sites are located within the project area. The NAHC provided a list of seven local Native Americans who can be contacted for information (see Attachment C of the *Archaeological Survey Report*). This information was forwarded to Caltrans staff for review.

ICF International staff consulted national, state, and local inventories of architectural and historic resources to determine the location of previously documented historic and architectural resources near the project. The following standard sources of information were consulted in the process of compiling this report:

- National Register of Historic Places (http://www.cr.nps.gov/nr);
- California Historical Landmarks (State of California 1996);
- California Points of Historical Interest (State of California 1992); and
- California Register of Historical Resources.

Staff also conducted archival research to establish a context for resource significance and identify local historical events and personages and development patterns. Additional resources consulted in the process of compiling this report include the following:

- ProQuest digital archives for the *Los Angeles Times*,
- Wilmington Public Library,
- TRW/Experian, and
- Los Angeles Department of Building and Safety.

No properties within the APE were listed on federal or state lists of historic resources.

In addition, on January 7, 2009, a letter and map set were sent to consulting and interested parties who may have knowledge of or concerns regarding historic properties in the area. The letter requested information pertaining to historic buildings, districts, sites, objects, or archeological sites of significance and was sent to the following recipients:

Figure 2-6a: Area of Potential Effect for the Project—Cover Sheet

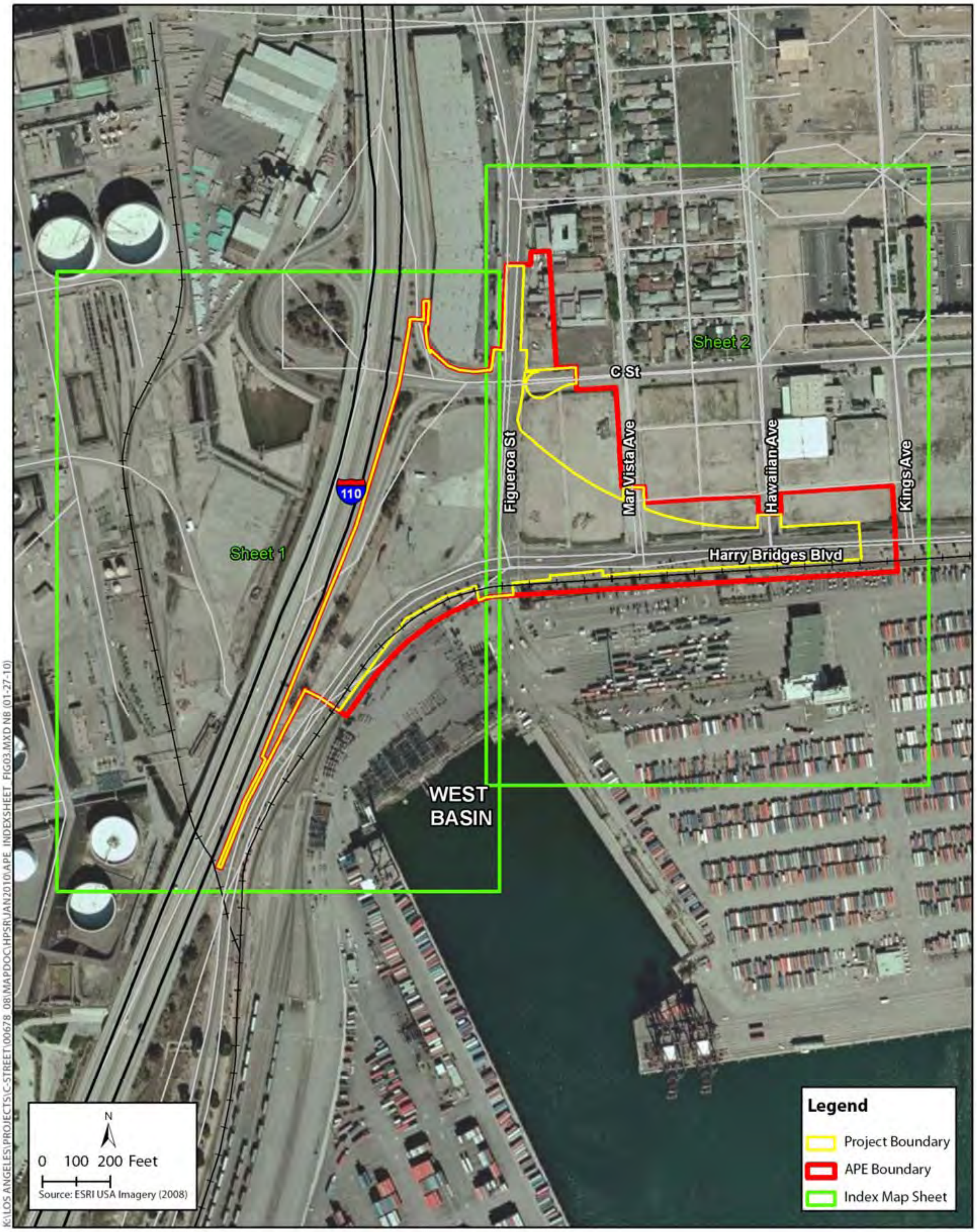

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Figure 2-6b: Area of Potential Effect for the Project

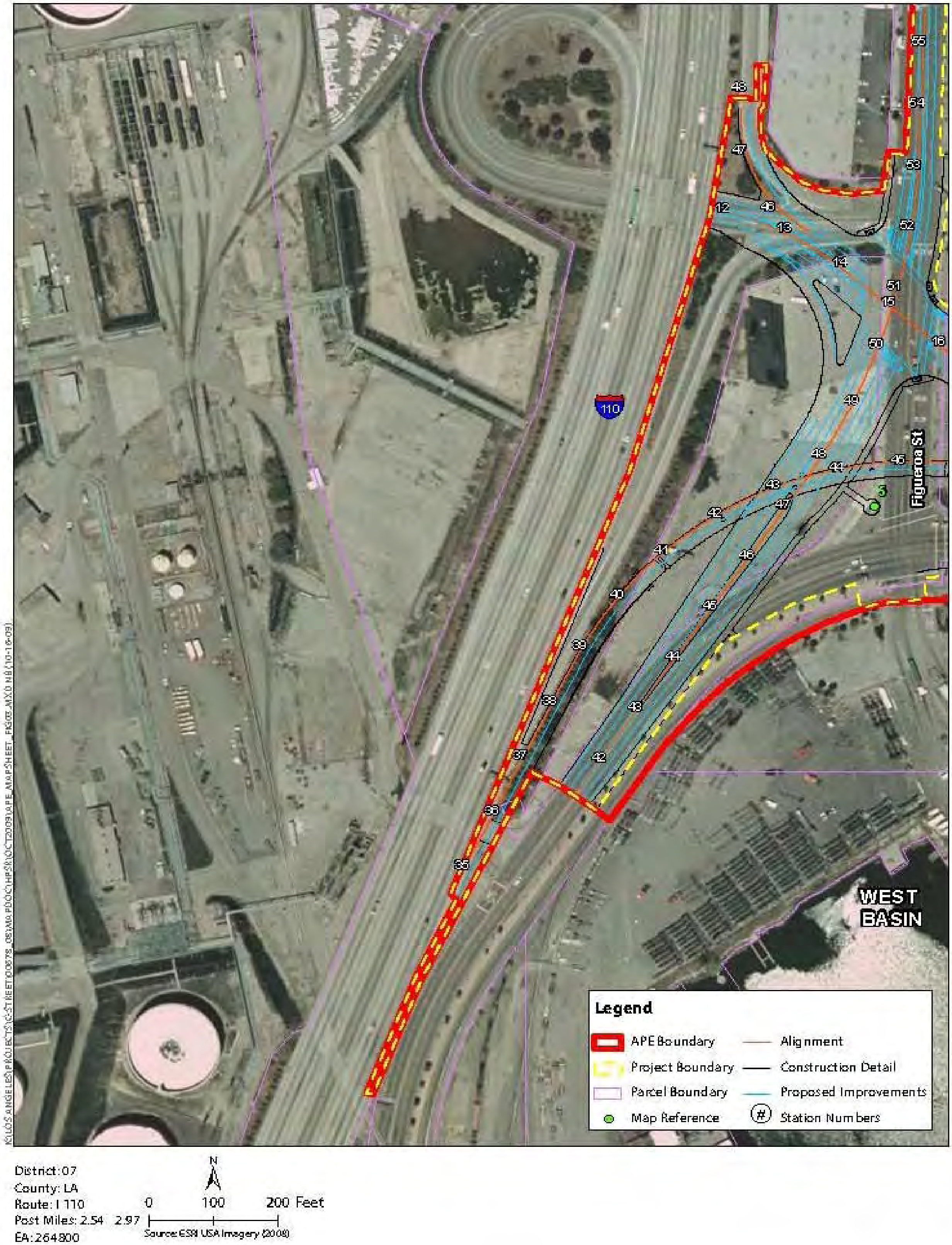
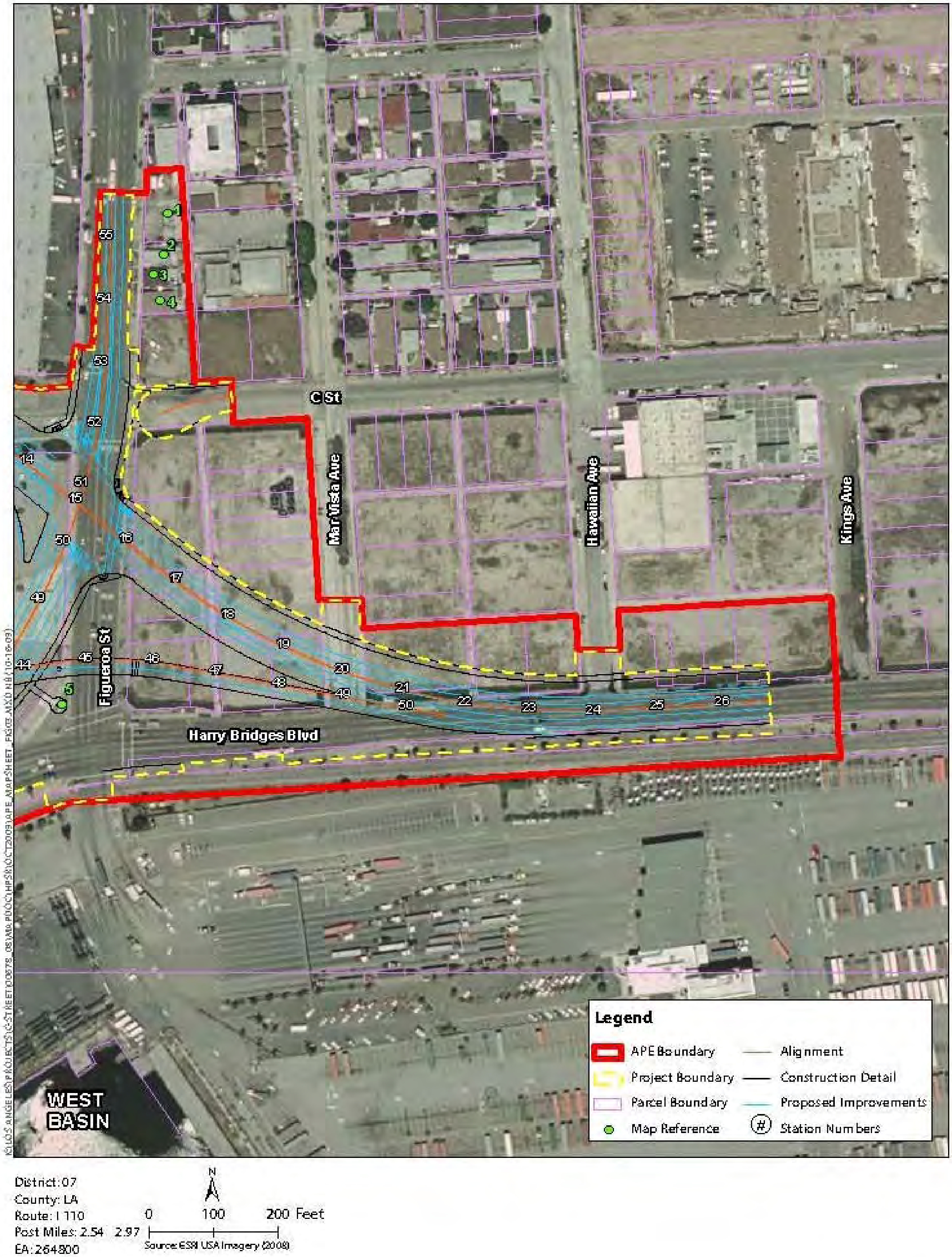


Figure 2-6c: Area of Potential Effect for the Project



- City of Los Angeles, Board of Harbor Commissioners Office;
- Councilwoman Janice Hahn;
- Filipino American National Historical Society, Los Angeles Chapter;
- Filipino Community, Harbor Area, Wilmington;
- Getty Conservation Institute;
- Historic Landmarks and Records Commission of Los Angeles County;
- Historical Society of Southern California;
- Los Angeles City Historical Society;
- Los Angeles Conservancy;
- Los Angeles Maritime Museum;
- Office of Historic Resources;
- San Pedro Bay Historical Society; and
- Wilmington Historical Society.

On February 2, 2009, Councilwoman Janice Hahn's deputy corresponded with John Heller, an architect at ICF International, stating that Councilwoman Hahn had no objection to the project. To date, no other correspondence addressing the proposed project has been received.

Cultural Resources within the Project Area Limits

The APE was established as the limits of 1) current and proposed new rights-of-way, 2) temporary construction easements, 3) staging areas, and 4) discernible noise increases. It was also used to define the resource study area for cultural resources. The APE was delineated to include whole parcels along the project limits regardless of full or partial property acquisition, permanent acquisition or temporary easement, or direct or indirect impact.

The record search revealed that 18 cultural resource surveys have been conducted within a 0.5-mile radius of the APE. Of these surveys, one survey investigated a portion of the APE. No archaeological resources have been recorded or identified during the surface survey within the project APE; however, 27 resources have been recorded within a 1-mile radius. Currently, there are no listings in the California Points of Historical Interest, the California Historical Landmarks, the California Register of Historical Resources, the National Register of Historic Places, or the California State Historic Resources Inventory for the project area.

A Phase I archaeological reconnaissance survey was conducted on January 30, 2008. The archaeological survey located no surficial archaeological sites. Architectural field surveys of all properties within the proposed APE were undertaken on December 30, 2008, according to standard Caltrans guidelines and procedures. No new surficial prehistoric or historical archaeological resources were observed within the proposed project archaeological APE during the survey.

Five built environment properties were evaluated for the National Register of Historic Places. Of those, four were found ineligible; the fifth, Air Raid Siren #82, located on the northwest corner of Harry Bridges Boulevard and South Figueroa Street, was found eligible as a contributing element of a geographically discontiguous historic district with roughly 165 sirens (see *Historical Property Survey Report*, page 4, as well as page 7-2 of the HRER).

Environmental Consequences

Construction Impacts

Alternative 1: No-Build Alternative

The No-Build Alternative would not involve any construction activities or improvements; therefore, temporary adverse effects under NEPA or significant impacts under CEQA on any historical or archaeological resources would not occur.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Under the Build Alternative, construction in the proposed area would occur only within the current right-of-way and would therefore not result in a direct adverse effect under NEPA or significant impact under CEQA on Air Raid Siren #82. However, the air raid siren is not individually eligible for the National Register of Historic Places. It could not be evaluated as part of a geographically extensive historic district within the scope of this project. The siren would not be affected by the proposed project because the proposed alignment would cut through the adjacent vacant parcel. There are no proposed changes to the immediate area in which the siren is located; and Air Raid Siren #82 will be preserved in place. Localized and intermittent increases in noise levels, the generation of groundborne vibration and dust, and changes in visual resources are expected to occur during construction activities; however, these temporary effects/impacts would not be substantial enough to result in indirect adverse effects under NEPA or significant impacts under CEQA on Air Raid Siren #82 or any other cultural or historical resources. However, ground-disturbing construction activities have the potential to affect unknown buried cultural resources.

Operational Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, there would be no improvements to I-110 and no substantial adverse effects under NEPA or significant impacts under CEQA on cultural resources would occur.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

No properties individually eligible for the National Register of Historic Places or California Register of Historical Resources are located in the APE. Physical changes to the parcel that contains Air Raid Siren #82 would be confined to the existing right-of-way in the vicinity of the siren; therefore, the Build Alternative would not affect any historical resources, and a finding of no effect/no impact is appropriate because there would be no adverse effects under NEPA or significant impacts under CEQA on historical resources within the APE, pursuant to State CEQA Guidelines Section 15064.5(b)(3). Furthermore, the air raid siren is not individually eligible for the National Register of Historic Places. It could not be evaluated as part of a geographically extensive historic district within the scope of this project. The siren would not be affected by the proposed project because the proposed alignment would cut through the adjacent vacant parcel. No changes are proposed in the immediate area in which the siren is located; Air Raid Siren #82 will be preserved in place.

The proposed operational transportation improvements to the existing transportation facility would result in no substantial changes in land use or the pattern of development in the area of any cultural resource that would cause indirect effects/impacts.

Avoidance, Minimization, and/or Mitigation Measures

Construction activities associated with the Build Alternative have the potential to affect unknown buried cultural resources adversely under NEPA or significantly under CEQA if any such unanticipated resources are unearthed during construction. Avoidance or a reduction in the nature of this effect/impact on buried or otherwise unidentified cultural resources would be achieved by implementing mitigation measures CR-1 and CR-2, which are standard practice on all Caltrans projects.

CR-1 If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area shall be stopped until a qualified archaeologist can assess the nature and significance of the find.

CR-2 If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the county coroner shall be contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner shall notify the Native American Heritage Commission (NAHC), which shall then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains shall contact Gary Iverson, Branch Chief of District 7, Division of Environmental Planning, so that he may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code Section 5097.98 are to be followed as applicable.

The proposed alignment would cut through the adjacent vacant parcel. No changes are proposed in the immediate area in which the siren is located; Air Raid Siren #82 will be preserved in place.

2.2 Physical Environment

2.2.1 Hydrology and Floodplains

The information presented in this section is based on the January 2010 *Water Quality Technical Report* prepared for the proposed project (ICF International 2010c).

Regulatory Setting

National Flood Insurance Program: The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 were intended to reduce the need for large, publicly funded flood control structures and disaster relief by restricting development in floodplains. The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA issues Flood Insurance Rate Maps (FIRMs) for communities participating in the NFIP. These maps delineate flood hazard zones in the community.

Executive Order 11988 (Floodplain Management): This directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless there is no practical alternative. FHWA requirements for compliance are outlined in 23 CFR 650 Subpart A. In order to comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments,
- Risks of the action,
- Impacts on natural and beneficial floodplain values,
- Support of incompatible floodplain development, and
- Measures to minimize floodplain impacts and preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

Affected Environment

Surface Water

The proposed project is located within the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB) (District 4), within the Los Angeles Harbor Watershed and over the West Coast Basin. The Los Angeles Harbor Watershed drains directly into the Los Angeles and Long Beach Harbors and includes portions of Los Angeles, Long Beach, Rancho Palos Verdes, and Rolling Hills. The main open-channel drain in the Harbor Subwatershed is the Gaffey Street Drain (Los Angeles Department of Public Works 2004). However, the proposed project would not drain into the Gaffey Street Drain but would directly to the storm drain that flows into the West Basin portion of the Los Angeles Harbor.

Stormwater

The City of Los Angeles' stormwater drain system is an extensive network of open channels and underground pipes designed to prevent flooding. The storm drain system is separate from Los Angeles' sewer system and receives no treatment or filtering prior to discharging to the ocean.

Existing drainage at the project site includes flow conveyance to storm drain inlets. The water then enters the various underground storm pipes, which empty into the West Basin. The various underground storm pipes belong to three different agencies (i.e., the State of California, the County, and the City). The agencies' systems intertwine; for example, water from state stormwater pipes flows into City stormwater pipes before flowing into the West Basin. Only County and City stormwater pipes empty into the West Basin. A more detailed discussion of the City's stormwater drainage system and impacts related to stormwater runoff is provided in Section 2.2.2 (Water Quality and Stormwater Runoff).

Flood and Tsunami/Seiche Risk

According to FEMA's FIRM and the City's flood zone mapping, the project is not located within a 100-year floodplain. However, portions of the site are identified as being within a 500-year floodplain. Figure 2-7 shows the proposed project area with flood zones.

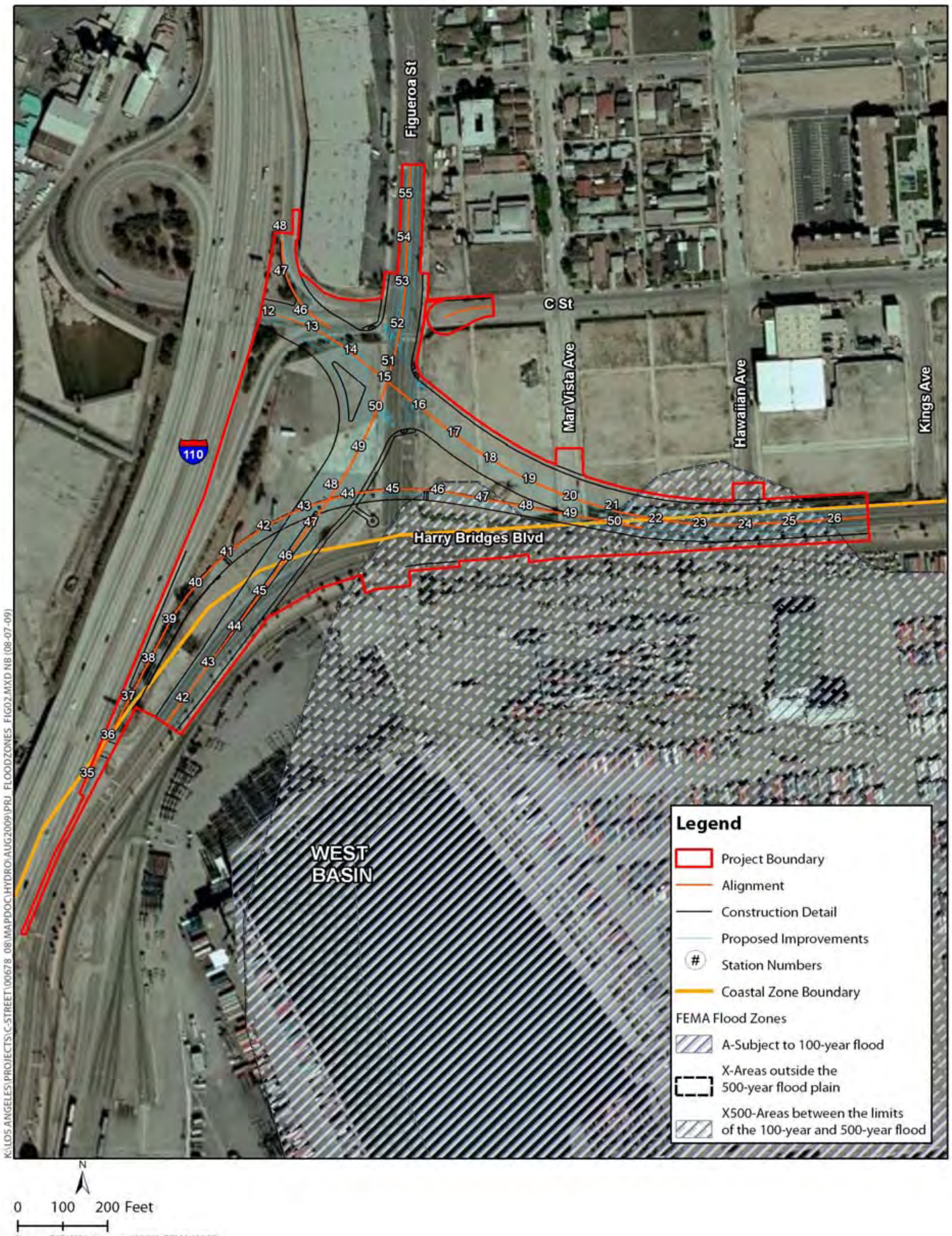
The project is, at its closest point, approximately 250 feet from the West Basin (Harbor Waters) and, at its farthest point, approximately 400 feet away. A small area in the southernmost portion of the project site is a tsunami hazard area (City of Los Angeles General Plan Safety Element 1996).

Groundwater

The West Coast Basin, with a surface area of 91,300 acres, is an adjudicated entity, meaning, in this instance, that the groundwater rights of all overlying parties and appropriators are determined by the court. The court also decides who the extractors are, how much groundwater those well owners can extract, and who the watermaster will be to ensure that the basin is managed in accordance with the court's decree (Department of Water Resources 2009). The West Coast Basin is bound on the west by Santa Monica Bay; on the east by the Newport-Inglewood fault zone; on the north by the Ballona escarpment, an abandoned erosional channel from the Los Angeles River; and on the south by San Pedro Bay and Palos Verdes Hills. The West Coast Basin supplies approximately 53,000 acre-feet per year (AFY) of groundwater (Department of Water Resources 2004). Figure 2-8 identifies the aforementioned features as well as groundwater elevation contours as of fall 2008.

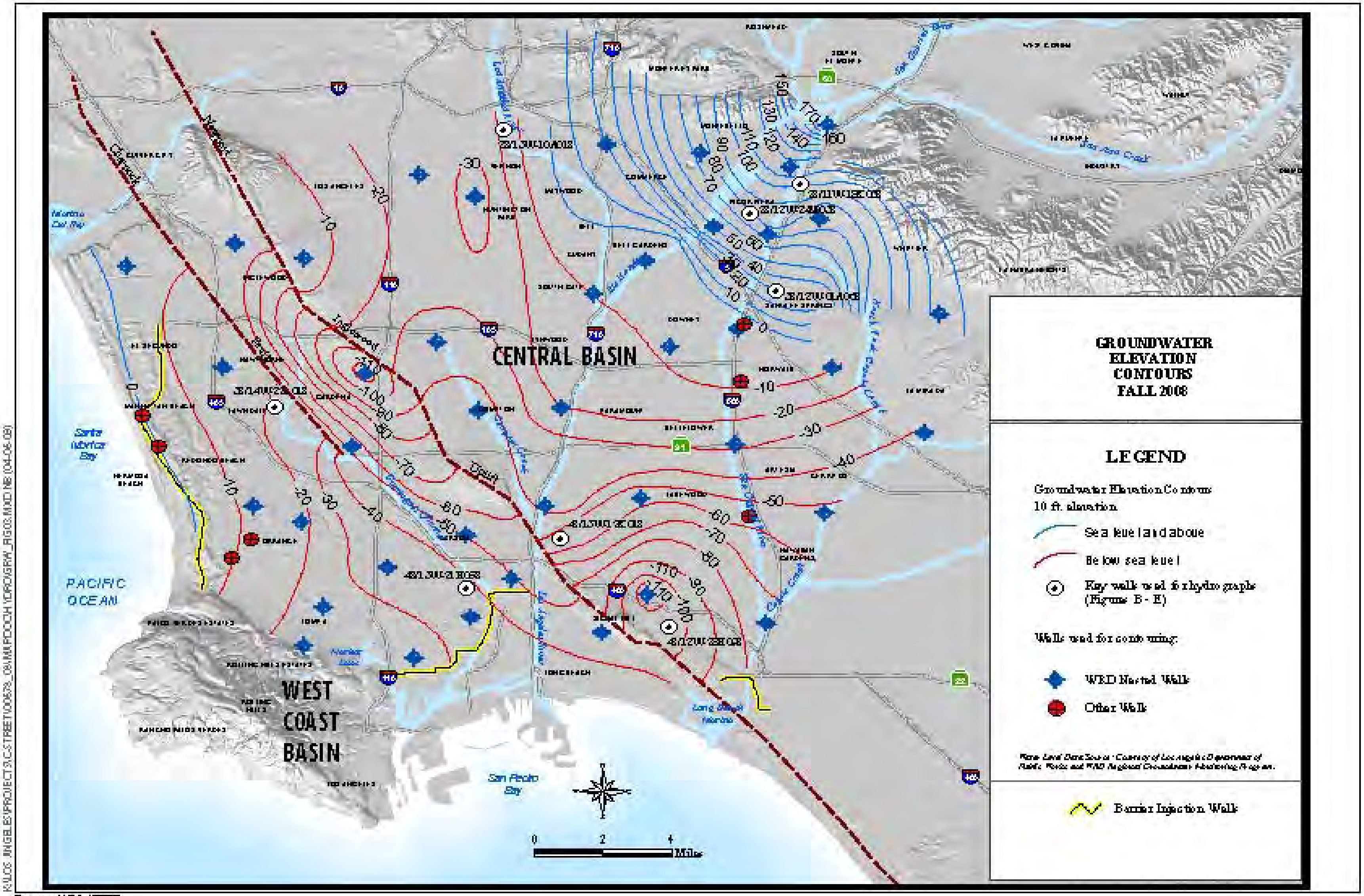
Groundwater levels have risen about 30 feet from the levels measured before adjudication of the subbasin in 1961. The general regional groundwater flow pattern is southward and westward from the Central Coastal Plain to the ocean (Department of Water Resources 2004).

Figure 2-7: Proposed Project with Flood Zones



Source: ESRI USA Imagery (2008), FEMA (2007

Figure 2-8: Groundwater Elevation Contours



Source: WRD (2008)

There are several aquifers present in the subbasin. The storage capacity of the primary water-producing aquifer, the Silverado aquifer, is estimated to be 6,500,000 acre-feet (Department of Water Resources 2004).

Seawater intrusion occurs in some aquifers that are exposed to the ocean offshore. Injection wells located near Wilmington form a protective mound at the Dominguez Gap Injection Barrier. This projective mound inhibits the inland flow of saltwater into the subbasin. The Dominguez Gap Injection Barrier injected 3,787 acre-feet of imported water and 1,695 acre-feet of recycled water during fiscal year 2008. The Dominguez Gap Injection Barrier has 94 injection wells and 224 observation wells (Department of Water Resources 2008). These wells are located upgradient from the proposed project location (Los Angeles Department of Public Works 2004).

Environmental Consequences

Construction Impacts

Alternative 1: No-Build Alternative

Since no construction activities are proposed under the No-Build Alternative, no adverse effects under NEPA or significant impacts under CEQA would occur.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

The existing drainage pattern in the project area would be maintained during construction, although temporary drainage detours around facilities undergoing reconstruction would be required to convey any storm flows. The potential for erosion during construction is discussed in Section 2.2.2, Water Quality and Stormwater Runoff.

Operational Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, no modifications to existing drainage facilities would occur, and existing hydrological and flood conditions would remain. Therefore, the No-Build Alternative would not result in adverse effects under NEPA or significant impacts under CEQA involving hydrological and/or flood conditions.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

The current drainage area will not be altered. The site currently drains into the City’s stormwater drainage system. As described above, the City’s stormwater drainage system is an extensive network of open channels and underground pipes designed to prevent flooding. The storm drain system is separate from Los Angeles’ sewer system and receives no treatment or filtering prior to discharging to the ocean. Stormwater runoff from the project site is captured by the City’s stormwater drainage system and discharged into the West Basin (Harbor Waters). This would continue after the project is built.

The proposed project would result in less water entering the drainage system due to a reduction in the total area of impervious surfaces. The existing impervious area is 9.5 acres. The project would reduce this to 6.6 acres, or a 2.9-acre reduction in impervious surface area. Therefore, the effects on the site's hydrology will not be substantially adverse under NEPA or significant under CEQA.

A portion of the proposed project is located within the X500 zone, which is defined as the area between the limits of the 100-year and the 500- year flood zone. Therefore, the proposed project would not result in substantial adverse effects under NEPA or significant impacts under CEQA.

Because of the depth of the port and the proximity of the West Basin to the Pacific Ocean and the fact that the proposed project would be carried out along an existing transportation corridor and would not result in any new traffic, the proposed project would not expose people or structures to tsunami risks any greater than the existing conditions. As such, no adverse effects would occur. Therefore, tsunami/seiche effects would not be substantially adverse under NEPA or significant under CEQA.

Avoidance, Minimization, and/or Mitigation Measures

Adverse effects under NEPA or significant impacts under CEQA involving hydrology and floodplain would not occur as a result of the proposed project, and no avoidance, minimization, and/or mitigation measures are proposed.

2.2.2 Water Quality and Stormwater Runoff

The information presented in this section is based on the January 2010 *Water Quality Technical Report* prepared for the proposed project.

Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, the federal Water Pollution Control Act was amended, making the discharge of pollutants to the waters of the United States from any point source unlawful, unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The federal Water Pollution Control Act was subsequently amended in 1977 and renamed the Clean Water Act (CWA). The CWA, as amended in 1987, directed that stormwater discharges are point-source discharges. The 1987 CWA amendment established a framework for regulating municipal and industrial stormwater discharges under the NDPES program. Important CWA sections are listed below.

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for any federal project that proposes an activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the act.

- Section 402 establishes NPDES, a permitting system for discharges (except for dredged or fill material) into waters of the United States. RWQCBs administer this permitting program in California. Section 402(p) addresses stormwater and non-stormwater discharges.
- Section 404 establishes a permit program for the discharge of dredged or fill material into waters of the United States. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters."

State Requirements: Porter-Cologne Water Quality Control Act (California Water Code)

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a Report of Waste Discharge for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair beneficial uses of the surface and/or groundwater of the state.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives) required by the CWA and regulating discharges to ensure that the objectives are met. Details regarding water quality standards in a project area are contained in the applicable RWQCB Basin Plan. States designate beneficial uses for all water body segments and then set criteria necessary to protect these uses. Consequently, the water quality standards developed for particular water segments are based on the designated use and vary depending on such use. In addition, each state identifies waters failing to meet standards for specific pollutants, which are state listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point-source controls, the CWA requires establishing total maximum daily loads (TMDLs). TMDLs establish allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, water pollution control, and water quality functions throughout the state. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

NPDES Program. The SWRCB adopted Caltrans' Statewide NPDES Permit (Order No. 99-06-DWQ) on July 15, 1999. This permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. NPDES permits establish a 5-year permitting time frame. NPDES permit requirements remain active until a new permit has been adopted.

In compliance with the permit, Caltrans developed the statewide Stormwater Management Plan (SWMP) to address stormwater pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in stormwater and non-stormwater discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of best management practices (BMPs). The proposed project would be programmed to follow the guidelines and procedures outlined in the 2003 SWMP to address stormwater runoff or any subsequent SWMP version draft and approved.

Municipal Separate Storm Sewer System Program. The U.S. Environmental Protection Agency (EPA) defines a Municipal Separate Storm Sewer System as any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, country, or other public body having jurisdiction over stormwater that are designed or used for collecting or conveying stormwater. As part of the NPDES program, EPA initiated a program requiring that entities having Municipal Separate Storm Sewer Systems to apply to their local RWQCBs for stormwater discharge permits. The program proceeded through two phases. Under Phase I, the program initiated permit requirements for designated municipalities with populations of 100,000 or greater. Phase II expanded the program to municipalities with populations less than 100,000.

The Los Angeles County Department of Public Works (LACDPW) regulates a Standard Urban Stormwater Mitigation Plan (SUSMP). This plan requires various BMPs to be implemented in an effort to remove unwanted pollutants and trash from the existing storm drain systems.

Construction Activity Permitting. Section H.2, Construction Program Management, of Caltrans' NPDES permit states that "The Construction Management Program shall be in compliance with requirement of the NPDES General Permit for Construction Activities (Construction General Permit)." Construction General Permit (Order No. 2009-009-DWQ, adopted on September 2, 2009, became effective on July 1, 2010. The permit regulates stormwater discharges from construction sites that result in a disturbed soil area of 1 acre or greater and/or are part of a common plan of development. By law, all stormwater discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least 1 acre must comply with the provisions of the General Construction Permit.

The newly adopted permit separates projects into Risk Levels 1 through 3. Requirements apply according to the risk level determined. For example, a Risk Level 3 (highest risk) project would require compulsory stormwater runoff pH and turbidity monitoring. Risk levels are determined during the design phase and are based on potential erosion and transport to receiving waters. Applicants are required to develop and implement an effective Stormwater Pollution Prevention Plan (SWPPP).

During the construction phase, compliance with the permit and Caltrans' Standard Special Conditions requires appropriate selection and deployment of both structural and non-structural BMPs. These BMPs must achieve performance standards of best available technology economically achievable/best conventional pollutant control technology to reduce or eliminate stormwater pollution.

Discussion of the Los Angeles RWQCB Basin Plan and CWA Section 303(d) list is included in the Affected Environment section, below.

Affected Environment

Surface Water

The proposed project is located within the jurisdiction of the Los Angeles RWQCB (Region 4). The California Water Code, Division 7, Chapter 4, Section 13241, specifies that each RWQCB shall establish water quality objectives that are necessary for the reasonable protection of beneficial uses and the prevention of nuisances. The Los Angeles RWQCB enforces water quality objectives for inland surface waters, wetlands, and groundwaters as part of the Basin Plan. The statewide objectives for ocean waters under the SWRCB's Water Quality Control Plan for Ocean Waters of California (Ocean Plan) and the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) apply to all ocean waters in the region. The proposed project does not include the discharge of thermal waste or elevated-temperature waste into ocean waters. Therefore, the Thermal Plan and Ocean Plan will not be discussed further.

The regional inland surface water quality objectives contained in the Basin Plan pertain to ammonia, bacteria, coliform, bioaccumulation, biochemical oxygen demand (BOD), biostimulatory substances, chemical constituents, chlorine, total residual, color, exotic vegetation, floating material, methylene blue activated substances (MBAs), mineral quality, nitrogen (nitrate, nitrite), oil and grease, oxygen, dissolved (DO), pesticides, pH, polychlorinated biphenyls (PCBs), radioactive substances, solid, suspended, or settleable materials, taste and odor, temperature, toxicity, and turbidity.

Wetlands are under the regional objectives for surface water quality but also have regional narrative objectives for hydrology and habitat protection.

Stormwater from the proposed project would eventually reach Los Angeles Harbor, which is included on the CWA Section 303(d) list for many water quality impairments. However, the "Tributary Rule" states that projects shall not contribute to any downstream water quality impairment.

The following contaminants are cited in the most recent 2006 CWA Section 303(d) list of water-quality-limited segments for the Los Angeles RWQCB, which was adopted by EPA in 2007 (see Table 2-36) (Los Angeles RWQCB 2006).

On July 1, 2004, the Los Angeles Harbor bacteria TMDL (Inner Cabrillo Beach and Main Ship Channel) was adopted by the Los Angeles RWQCB (effective March 10, 2005). The reason for the TMDL was because elevated bacterial indicator densities were causing impairments associated with water contact recreation (REC-1) and beneficial uses at Inner Cabrillo Beach and potential REC-1 uses at the Main Ship Channel in the Los Angeles Harbor. Swimming in marine waters with elevated bacterial indicator densities has long been associated with adverse health effects (Los Angeles RWQCB 2004).

Table 2-36: Surface Water Quality Concerns on the Los Angeles RWQCB Section 303(d) List

Name	Pollutant/Stressor	Potential Sources	Estimated Area Affected	Proposed TMDL Completion
Los Angeles Harbor—Cabrillo Marina	DDT	Source Unknown	77 acres	2019
	PCBs (polycholorinated biphenyls)	Source Unknown	77 acres	2019
Los Angeles Harbor—Consolidated Slip	2-Methylnaphthalene This listing was made by EPA for 2006.	Source Unknown	36 acres	2008
	Benthic Community Effects	Nonpoint Source	36 acres	2019
	Benzo(a)pyrene (PAHs) This listing was made by EPA for 2006.	Source Unknown	36 acres	2008
	Benzo(a)anthracene This listing was made by EPA for 2006.	Source Unknown	36 acres	2008
	Cadmium (sediment) Historical use of pesticides and lubricants, stormwater runoff, aerial deposition, and historical discharges for metals.	Nonpoint Source	36 acres	2019
	Chlordane (tissue and sediment)	Nonpoint Source	36 acres	2019
	Chromium (sediment)	Nonpoint Source	36 acres	2019
	Chrysene (C1-C4) This listing was made by EPA for 2006.	Source Unknown	36 acres	2008
	Copper (sediment)	Nonpoint Source	36 acres	2019
	DDT (tissue and sediment)	Nonpoint Source	36 acres	2019
	Dieldrin	Nonpoint Source	36 acres	2008
	Lead (sediment)	Nonpoint Source	36 acres	2019
	Mercury (sediment) Historical use of pesticides and lubricants, stormwater runoff, aerial deposition, and historical discharges for metals.	Nonpoint Source	36 acres	2019

Name	Pollutant/Stressor	Potential Sources	Estimated Area Affected	Proposed TMDL Completion
	PCBs (Polychlorinated biphenyls) (tissue and sediment) Fish Consumption Advisory for PCBs.	Nonpoint Source	36 acres	2019
	Phenanthrene This listing was made by EPA for 2006.	Source Unknown	36 acres	2008
	Pyrene This listing was made by EPA for 2006.	Source Unknown	36 acres	2008
	Sediment Toxicity	Nonpoint Source	36 acres	2019
	Toxaphene (tissue)	Nonpoint Source	36 acres	2019
	Zinc (sediment) Historical use of pesticides and lubricants, stormwater runoff, aerial deposition, and historical discharges for metals.	Nonpoint Source	36 acres	2019
Los Angeles Harbor—Fish Harbor	Benzo(a)pyrene (PAHs) This listing was made by EPA for 2006.	Source Unknown	91 acres	2008
	Benzo(a)anthracene	Source Unknown	91 acres	2019
	Chlordane	Source Unknown	91 acres	2019
	Chrysene (C1-C4)	Source Unknown	91 acres	2019
	Copper	Source Unknown	91 acres	2019
	DDT	Nonpoint Source	91 acres	2019
	Dibenz(a,h)anthracene	Source Unknown	91 acres	2019
	Lead	Source Unknown	91 acres	2019
	Mercury	Source Unknown	91 acres	2019
	PAHs (Polycyclic Aromatic Hydrocarbons)	Nonpoint Source	91 acres	2019
	PCBs (Polychlorinated biphenyls) (tissue and sediment) Fish Consumption Advisory for PCBs.	Nonpoint Source	91 acres	2019

Name	Pollutant/Stressor	Potential Sources	Estimated Area Affected	Proposed TMDL Completion
	Phenanthrene	Source Unknown	91 acres	2019
	Pyrene This listing was made by EPA for 2006.	Source Unknown	91 acres	2019
	Sediment Toxicity	Nonpoint Source	91 acres	2019
	Zinc (sediment) Historical use of pesticides and lubricants, stormwater runoff, aerial deposition, and historical discharges for metals.	Nonpoint Source	91 acres	2019
Los Angeles Harbor—Inner Cabrillo Beach Area	Copper	Source Unknown	82 acres	2019
	DDT Fish Consumption Advisory for DDT.	Nonpoint Source	82 acres	2019
	Indicator Bacteria	Source Unknown	82 acres	2004
	PCBs (Polychlorinated biphenyls) (tissue and sediment) Fish Consumption Advisory for PCBs.	Nonpoint Source	82 acres	2019

Source: Los Angeles Regional Water Quality Control Board, 2006.

Table 2-37 provides a summary of the surface water quality objectives that are applicable to the proposed project. The regional water quality objectives are set to ensure beneficial uses are maintained. Not all of the objectives have numerical thresholds. Also, because the project does not affect waters with existing or potential municipal uses, the objectives that contain a municipal threshold are not shown in the table.

Table 2-37: Numerical Inland Surface Water Quality Objectives

Surface Water Quality Objectives	
Bacteria, Coliform	Rolling 30-day Geometric Mean Limits[1] a. Total coliform density shall not exceed 1,000/100ml b. Fecal coliform density shall not exceed 200/100 ml c. Enterococcus density shall not exceed 35/100 ml Single-Sample Limits a. Total coliform density shall not exceed 10,000/100 ml b. Fecal coliform density shall not exceed 400/100 ml c. Enterococcus density shall not exceed 104/100 ml d. Total coliform density shall not exceed 1,000/100 ml, if the ration of fecal to total coliform exceeds 0.1
Chlorine, Total Residual	< 0.1 mg/L
Nitrogen (Nitrate, Nitrite)	Shall not exceed: 10 mg/L nitrogen as nitrate-nitrogen + nitrite-nitrogen[2] 45 mg/L at nitrate[3] 10 mg/L as nitrate-nitrogen[4] 1 mg/L as nitrite-nitrogen[5]
Dissolved Oxygen	At minimum mean annual DO for all waters:[6] > 7 mg/L No single determination < 5.0 mg/L Outer Harbor area of Los Angeles/Long Beach Harbors: ≥ 6.0 mg/L No single determination < 5.0 mg/L
pH	Inland Surface Waters: Not < 6.5 or > 8.5 as a result of waste discharge Ambient pH shall not change more than 0.5 unit from natural conditions due to waste discharge Bays or Estuaries: Not < 6.5 or > 8.5 as a result of waste discharge Ambient pH shall not change more than 0.2 unit from natural conditions due to waste discharge
PCBs	Purposeful discharge is prohibited Pass through or uncontrollable discharges to waters of the region or locations where the waste can subsequently reach waters of the region limited to 70 pg/L[7] (30-day average) – protection of human health 14 ng/L[8] (daily average) – protection of aquatic life in inland freshwaters 30 ng/L (daily average) – protection of aquatic life in estuarine waters
Turbidity	When natural turbidity is 0–50 NTU[9] increase < 20% When natural turbidity is > 50 NTU increase < 10%

Surface Water Quality Objectives
Notes: [1] Based on a minimum of not less than four samples for any 30-day period. [2] NO_3-N + NO_2-N. [3] NO_3. [4] NO_3-N. [5] NO_2-N. [6] Except when natural conditions cause lesser concentrations. [7] pg/L = picograms per liter (1 picogram/liter = 1.0e-12 gram/liter). [8] ng/L = nanograms per liter (1 nanogram/liter = 1.0e-9 gram/liter). [9] NTU = nephelometric turbidity units. Source: Los Angeles RWQCB's Basin Plan, 1994.

Groundwater

The project is located in the west subbasin of the Coastal Plain of the Los Angeles Groundwater Basin (West Basin).

The regional water quality objectives for groundwater contained in the Basin Plan pertain to bacteria, chemical constituents and radioactivity, mineral quality, nitrogen (nitrate, nitrite), and taste and odor. The *Water Quality Technical Report* includes the Los Angeles RWQCB's Basin Plan list of water quality objectives for the region in Chapter 3 of the Basin Plan. Table 2-38 provides information on the groundwater quality objectives from the Basin Plan for the project. Because the West Coast Basin has municipal beneficial uses, chemical constituents and radioactivity levels are not to exceed the limits specified under Title 22 of the California Code of Regulations (64431, 64443, 64444) (see the *Water Quality Technical Report*).

Table 2-38: Numerical Groundwater Quality Objectives

Groundwater Quality Objectives									
Ground-water Basin	**Objectives (mg/L)**								
	TDS	**Sulfate**	**Chloride**	**Boron**	**NO_3-N + NO_2-N**	**NO_3**	**NO_3-N**	**NO_2-N**	**Bacteria**
West Coast Basin (4.11-03)	800	250	250	1.5	< 10	< 45	< 10	< 1	< 1.1/100 ml

Source: Los Angeles RWQCB's Basin Plan, 1994.

Key groundwater quality constituents include TDS, iron, manganese, nitrate, trichloroethylene, tetrachloroethylene, arsenic, hexavalent chromium, methyltertiary butyl ether (MTBE), perchlorate, and radon (Los Angeles Department of Public Works 2004).

Data from 400 regularly sampled production and 250 regularly sampled observation wells in the Central and West Coast Basins indicate that groundwater is generally of high quality and requires little to no treatment before being pumped and served to the public (Water Replenishment District 2008). Less than 0.5 percent of 750,000 records of groundwater test results for monitoring and production wells exceeded their Primary Maximum Contaminant Levels (PMCLs).[26] Only 2 percent exceeded their Secondary Maximum Contaminant Levels (SMCLs).[27] The highest eight PMCL exceedances include arsenic, perchloroethylene, trichloroethylene, di (2-thylhexyl) phthalate, nitrate, aluminum, gross alpha radiation, and pechlorate, listed in order of most common detection above their PMCLS. The highest eight SMCLs exceedances include TDS, manganese, odor, iron, color, chloride, sulfate and aluminum (Water Replenishment District 2008).

Environmental Consequences

<u>*Construction Impacts*</u>

Alternative 1: No-Build Alternative

Since no construction activities would occur, there would be no adverse effects under NEPA or significant impacts under CEQA on water quality.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

The proposed project would be regulated under Caltrans' NPDES General Construction Permit and, if necessary, the CWA Section 402 General Dewatering Permit (to be obtained if amount of dewatering is greater than expected and therefore not covered under the NPDES General Construction Permit). Because the proposed project would be constructed within City and State ROW, NPDES Caltrans Statewide Permit (Order No. 99-06-DWQ) (NPDES No. CAS 000003) and Construction General Permit (Order No. 2009-0009-DWQ) (NPDES No. CAS 000002) would apply to this project. The City of Los Angeles would file a Notice of Intent (NOI) with SWRCB at least 30 days prior to the start of construction.

Per Caltrans' NPDES General Construction Permit, water quality pollution-minimization measures could include requiring the contractor to submit a SWPPP prior to the start of construction and implementing site design measures, source-control measures, and stormwater treatment measures. A SWPPP and Monitoring Program would be prepared and implemented prior to construction activities. The SWPPP would describe structural and nonstructural BMPs to minimize or eliminate the potential for spills and leakage of construction materials and erosion of disturbed areas by water and wind. The SWPPP would identify construction-period BMPs to reduce water quality impacts. The SWPPP would emphasize: (1) temporary erosion control measures to reduce sedimentation and turbidity of surface runoff from disturbed areas; (2) personnel training; (3) scheduling and implementation of BMPs during construction and for the

[26] Primary Maximum Contaminant Levels: Regulatory limits established for compounds that pose a health risk to consumers.
[27] Secondary MCLs: Established for compounds that are not a health risk but are an aesthetic nuisance, such as taste, odor, or discoloration of the water or plumbing fixtures.

various seasons, noting the rainy season is from October 1 to May 1; (4) identification of non-stormwater discharge BMPs; and (5) mitigation and monitoring during construction.

The following Construction Site BMPs are expected to be implemented for this project: SS-1 Scheduling; SS-2 Preservation of Existing Vegetation; SS-5 Soil Binders; SS-8 Temporary Mulch; SS-9 Earth Dikes/Drainage Swales & Ditches; SC-1 Silt Fence; SC-5 Temporary Fiber Rolls; SC-7 Street Sweeping and Vacuuming; SC-10 Storm Drain Inlet Protection; TC-1 Stabilized Construction Entrance/Exit; NS-1 Water Conservation Practices; NS-6 Illicit Connection/Illegal Discharge Detection and Reporting; NS-8 Vehicle and Equipment Cleaning; NS-9 Vehicle and Equipment Fueling; NS-10 Vehicle and Equipment Maintenance; NS-12 Concrete Curing; WM-1 Material Delivery and Storage; WM-2 Material Use; WM-3 Stockpile Management; WM-4 Spill Prevention and Control; WM-5 Solid Waste Management; WM-8 Concrete Waste Management; WM-9 Sanitary/Septic Waste Management; WM-10 Liquid Waste Management; and Type D Erosion Control.

The proposed project would comply with all water quality standards and waste discharge requirements.

If dewatering is required above the amount covered in Caltrans' General Construction Permit, a General Dewatering Permit would be required. This permit requires the submission of an NOI and a Pollution Prevention and Monitoring Program (PPMP). The PPMP includes a description of the discharge location and its characteristics, primary pollutants, receiving waters, treatment systems, spill prevention plans, and other measures necessary to comply with the discharge limits. It must also include a representative sampling and analysis program as well as record keeping and a quarterly monitoring report.

Proper BMPs would be implemented to ensure that runoff from the proposed project would be filtered and polished so that it would not contribute to any impairment, irrespective of the concentration of the contribution.

Adverse effects/significant impacts on water quality and stormwater runoff would be minimized with the incorporation of design pollution prevention, treatment, and maintenance BMPs, and thus, the proposed project would not result in substantial adverse effects under NEPA or significant impacts under CEQA.

Operational Impacts

Alternative 1: No-Build Alternative

While no operational changes would be made, the No-Build Alternative may result in greater impacts on water quality than those of Alternative 2, the Build Alternative. The existing effect/impact of current conditions on water quality at the project location is not known. However, due to the implementation of stormwater treatment BMPs and the reduction in impervious surface area under Alternative 2, Alternative 1 would have a greater effect/impact on water quality than Alternative 2. See the Alternative 2 analysis (below) for more information.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

The U.S. Department of Transportation completed a study in 1996 to identify possible pollutants from roadways that may affect water quality. The following table (Table 2-39) contains a list of pollutants from roadways that are known to contribute to water quality-related issues.

Table 2-39: Known Water Quality Concerns from Roadway Stormwater Runoff

Constituents	Primary Sources
Particulates	Pavement wear, vehicles, atmosphere, maintenance, snow/ice abrasives, sediment disturbance
Nitrogen, Phosphorus	Atmosphere, roadside fertilizer application, sediments
Lead	Auto exhaust, tire wear, lubricating oil and grease, bearing wear, atmospheric fallout
Zinc	Tire wear, motor oil, grease
Iron	Auto body rust, steel highway structures, moving engine parts
Copper	Metal plating, bearing and bushing wear, moving engine parts, brake lining wear, fungicide and insecticide application
Cadmium	Tire wear, insecticide application
Chromium	Metal plating, moving engine parts, brake lining wear
Nickel	Diesel fuel and gasoline, lubricating oil, metal plating, bushing wear, brake lining wear, asphalt paving
Manganese	Moving engine parts
Bromide	Exhaust
Cyanide	Anticake compound used to keep deicing salt granular
Sodium, Calcium	Deicing salts, grease
Chloride	Deicing salts
Sulfate	Roadway bed, fuel, deicing salts
Petroleum	Spills, leaks or blow-by of motor lubricants, antifreeze and hydraulic fluids, asphalt leachate
PCBs, Pesticides	Spraying of highway rights-of-way, atmospheric deposition, PCB catalyst in synthetic tires
Pathogenic Bacteria	Soil litter, bird droppings, trucks hauling livestock/stockyard waste
Rubber	Tire wear
Asbestos*	Clutch and brake lining wear

Note [Table 2-39]:

* No asbestos has been identified in runoff; however, some breakdown products of asbestos have been measured.

Source: Federal Highway Administration. U.S. Department of Transportation Publication No. FHWA-PD-96-032. June 1996.

The operations-related water contaminants of concern are consistent with the contaminants found in the table above (Table 2-39). Cross referencing these contaminants with the CWA Section 303(d) list indentifies six contaminants that may have an effect/impact on an already-impaired harbor. These contaminants are copper, chromium, lead, PCBs, zinc, and sediment.

Impervious Area

The proposed project would reduce the amount of impervious surfaces. The existing impervious area is 9.5 acres (415,232 square feet); the total amount of impervious area after the proposed project is built would be 6.6 acres (288,049 square feet). Thus, there would be 2.9 fewer acres of impervious surface.

This reduction in the amount of impervious surfaces would translate into a reduction in the amount of runoff. Since runoff can both cause soil erosion and carry contaminants, this reduction would result in a beneficial effect/impact. However, any additional contribution of copper, chromium, lead, PCBs, zinc, or sediment would be considered an adverse effect/significant impact on the already-impaired Los Angeles Harbor.

Design pollution prevention and treatment BMPs would be considered and incorporated where appropriate and feasible in accordance with the procedures outlined in stormwater quality handbooks and the Project Planning and Design Guide (May 2007 or subsequent issuance). This would include coordination with the Los Angeles RWQCB with respect to feasibility, maintenance, and monitoring of treatment BMPs as set forth in Caltrans' State Stormwater Management Plan.

Avoidance, Minimization, and/or Mitigation Measures

No Build Alternative

No avoidance, minimization, and/or mitigation measures are required.

Build Alternative

Construction

With temporary construction site BMPs incorporated into the construction site management of the project, as described in the SWDR, no further avoidance, minimization, and/or mitigation measures are required.

Permanent

With the permanent treatment BMPs incorporated into the project, as described in the SWDR, no further avoidance, minimization, and/or mitigation measures are required.

2.2.3 Geology/Soils/Seismicity/Topography

The key sources of data used in the preparation of this section were the *Preliminary Foundation Report*, C Street/I-110 Freeway Access Ramp Improvements, San Pedro, California (Diaz Yourman & Associates 2009a); the *Phase I Initial Site Assessment* (ISA) for the project site, completed in January 2007 (Group Delta Consultants 2007); and the *Phase II Hazardous Waste Investigation* for the project site that was completed in March 2009 (Diaz Yourman & Associates 2009b). All of these reports include a survey of the geology, soils, seismic, and topographic conditions of the project site.

Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under CEQA.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans' Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. The current policy is to use the anticipated Maximum Credible Earthquake (MCE) from young faults in and near California. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

Additional Regulatory Information

National Natural Landmarks Program

The National Natural Landmarks Program was established in 1962 under authority of the Historic Sites Act of 1935. Administered by the National Park Service, the National Natural Landmarks Program lists sites that represent the nation's "best" examples of various types of biological communities or geologic features (meaning that they are in good condition and effectively illustrate the specific character of a certain type of resource) in the National Registry of Natural Landmarks. At present, the registry includes 587 sites. The goals of the National Natural Landmarks Program are as follows:

- to encourage the preservation of sites that illustrate the nation's geological and ecological character,
- to enhance the scientific and educational value of the sites preserved, and
- to strengthen public appreciation of natural history and foster increased concern for the conservation of the nation's natural heritage.

Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults (referred to as earthquake fault zones). It defines criteria for identifying active faults, giving legal weight to terms such as “active,” and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. It also encourages and regulates seismic retrofits of some types of structures.

Seismic Hazards Mapping Act of 1990

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Sections 2690–2699.6) is intended to avoid or reduce damage resulting from earthquakes. While the Alquist-Priolo Earthquake Fault Zoning Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Earthquake Fault Zoning Act (i.e., the state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped seismic hazard zones).

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

Surface Mining and Reclamation Act of 1975

The principal piece of legislation addressing mineral resources in California is the Surface Mining and Reclamation Act of 1975 (Public Resources Code Sections 2710–2719), which was enacted in response to land use conflicts between urban growth and essential mineral production. The stated purpose of this act is to provide a comprehensive surface mining and reclamation policy that will encourage the production and conservation of mineral resources while ensuring that adverse environmental effects of mining are prevented or minimized, that mined lands are reclaimed and residual hazards to public health and safety are eliminated, and that consideration is given to recreation, watershed, wildlife, aesthetics, and other related values. The Surface Mining and Reclamation Act of 1975 provides for the evaluation of an area’s mineral resources using a system of mineral resource zone classifications that reflect the known or inferred presence and significance of a given mineral resource.

Affected Environment

The project site is located within the southern coastal margin of the Los Angeles Coastal Plain. The site is located within the southwestern block of the Los Angeles Basin on the San Pedro Bay portion of the southward sloping continental shelf. Prior to harbor development, the Los Angeles and San Gabriel Rivers emptied into the area, which consisted of low-lying tidal lagoons, marshes, mud flats, and sand bars. Since the early 1900s, extensive land reclamation for harbor use has modified the natural topography and the landforms of the area into the present configuration, as shown on the Torrance, California, 7.5-minute series topographic map quadrangle. Figure 2-9 shows the topographic map quadrangle with the proposed project.

The project site is relatively flat, gently sloping toward the southeast. The ground surface at the project site is at an elevation ranging from 10 feet above mean sea level (MSL) in the southern part of the alignment to 20 feet above MSL in the northern part of the project site. The I-110 alignment runs along the east side of the elevated area of the oil refinery that slopes down toward I-110. General surface drainage is toward the southeast. I-110 is generally above the adjacent grade. Drainage along the freeway is away from the alignment and toward the designed collection area along the roadway. Street drainage within the project site is generally toward the southwest. An existing retaining wall on the east side of the I-110 right-of-way protects commercial property improvements. A 10-foot-wide paved right shoulder exists along this retaining wall. There are no designated natural landmarks at the project site.

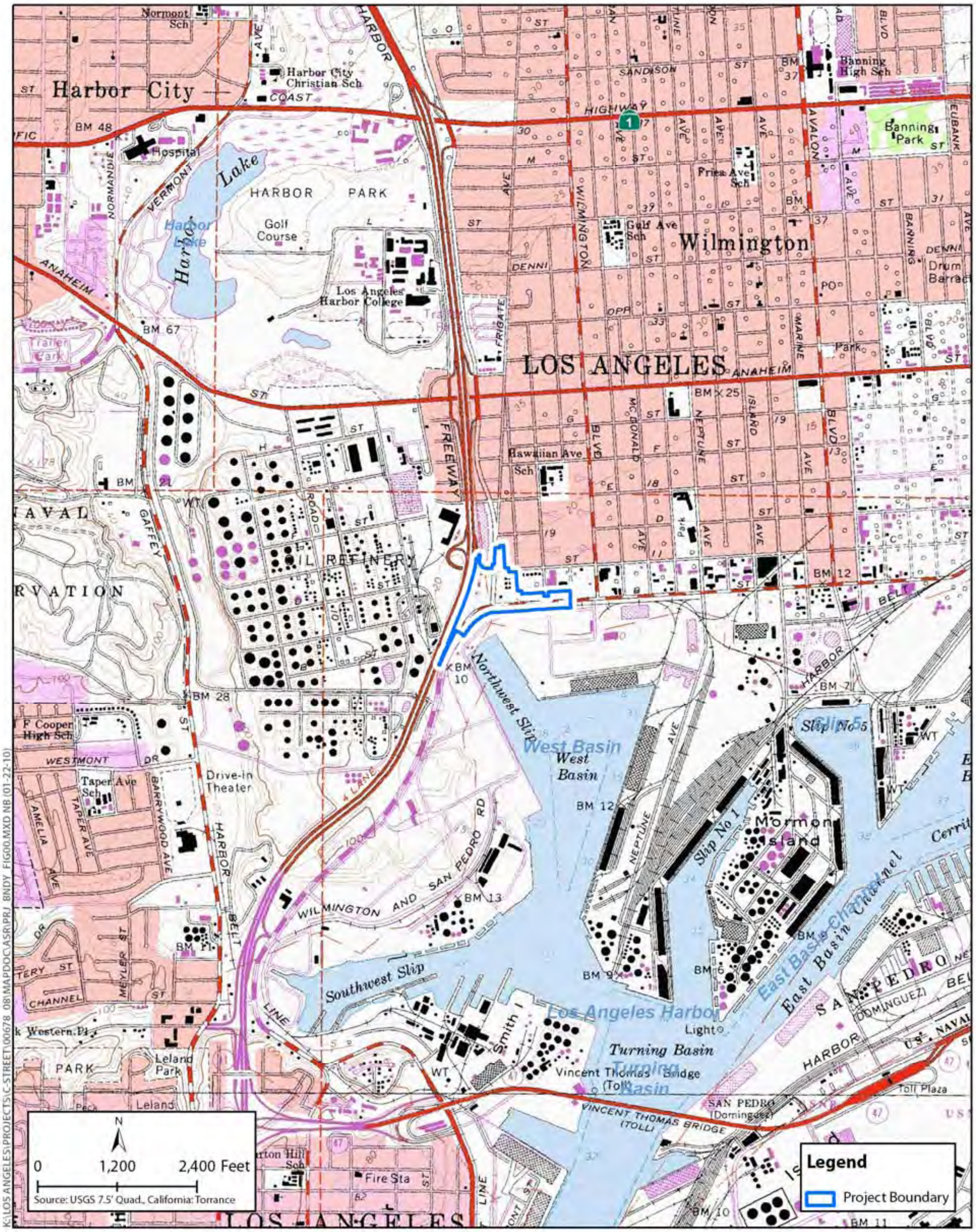
Site Geology

The Los Angles Coastal Plain is underlain by up to 9,000 to 11,000 feet of Tertiary[28] and Quaternary[29] sediments, which have filled the presently subsiding basin since Miocene time. According to the State Seismic Hazard map, most of the site is mapped as older Quaternary alluvial and fan deposits, consisting mainly of sand, silt, clay and gravel. In addition, an isolated area, underlain by Pleistocene to Holocene nonmarine terrace deposits, is present near I-110 and John S. Gibson Boulevard. These nonmarine terrace deposits consist of calcareous sands, shell fragments, and scattered gravels and cobbles. Manmade fill materials are also reported to be present east of I-110 and south of C Street. Dredging of marsh soils and construction of the West Basin occurred in the 1920s and 1930s. Some of the backland areas were reportedly under water but were filled by 1946. The presence of salt clays below elevations of 0 to 3 or more feet indicate that the area originally consisted of soft marsh deposits, and up to 10 to 15 feet of fill was placed in the area to bring it to the present grades as part of the harbor development.

[28] The Tertiary is a term for a geologic period 65 million to 2.588 million years ago. The Tertiary covered the time span between the superseded Secondary period and the Quaternary. The period began with the demise of the non-avian dinosaurs in the Cretaceous–Tertiary extinction event, at start of the Cenozoic era, spanning to beginning of the most recent Ice Age, at the end of the Pliocene epoch.

[29] The Quaternary period is the youngest of three periods of the Cenozoic era in the geologic time scale of the International Commission on Stratigraphy. It follows after the Neogene period, spanning 2.588 +/- 0.005 million years ago to the present. The Quaternary includes two geologic epochs: the Pleistocene and the Holocene epochs.

Figure 2-9: Topographic Map Quadrangle



Groundwater Conditions

Based on the published highest historical groundwater contours for the San Pedro and Torrance quadrangles, groundwater appears to be at a depth of 10 feet or less below the ground surface. According to published maps, groundwater could be 3 to 10 feet below the surface. The site area is located south and downgradient of the Dominguez Gap Sea Water Injection Barrier, which is maintained by the County (Water Replenishment District 2007). Based on the barrier's location and site physiography, shallow groundwater is expected to be within a zone of 0 to 5 feet (or 3 to 8 feet mean lower low water [MLLW]). It generally flows southerly but is subject to minor tidal fluctuations near the water's edge. Environmental groundwater testing was not planned as part of this investigation. Three USGS water wells are identified within 1 mile of the project site: Sites 004S013W31P001S, 004S013W31J001S, and 004S013W31N004S. These wells are reported to be completed to depths of 900 feet, 1,005 feet, and 836 feet, respectively. It is not known whether they continue to be used for water supply, and the quality of the water produced was not reported.

Seismic Conditions

No active, potentially active, or major inactive faults cross the project site. Furthermore, the project site is not located within any Alquist-Priolo Earthquake Fault Zone designated by the California Geological Survey.

The major controlling Holocene fault for the project site is the Palos Verdes fault, located about 0.7 mile from the project site. The alternate San Pedro fault is present about 0.1 mile from the inferred branch and about 0.4 mile from the proposed project construction area. Neither the alternate nor the inferred traces have been located in this area, though the evidence of the fault is very strong. The Gaffey anticline is about 0.5 mile west of the project site. This anticline is active, with upward movement cutting off the Harbor Lake drainage to the West Basin. The Palos Verdes fault has been assigned a 7.75 earthquake Moment Magnitude (MW), and according to Caltrans (1996), the project site is located next to the 0.6g peak ground acceleration contour. However, a model for seismic hazards analysis for the Port of Los Angeles assigns a fault rupture of 30 to 60 kilometers (km), resulting in a MW 7.0 to 7.25 for this potential seismic source. The maximum rupture would be associated with a maximum earthquake of MW 7.25, with an average recurrence of approximately 900 years. Slip on the fault occurs at a rate of 3 millimeters/year and represents one of the highest slip rates in Los Angeles Basin. The sense of motion is predominantly strike slip, with approximately a 15 percent vertical component. Maximum surface displacement during the maximum earthquake is estimated to be about 2.35 meters (m) horizontal and 0.35 m vertical, emanating from a hypocenter at an approximate depth of 10 to 15 km (Schell 2007; McNeilan et al. 1996).

Environmental Consequences

Construction Impacts

Alternative 1: No-Build Alternative

Since no construction activities are proposed under the No-Build Alternative, no adverse effects under NEPA or significant impacts under CEQA would occur with respect to geology, soils, seismicity, or topography from existing conditions.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Construction of the project would require excavation, along with disturbances of soils and vegetation. Stormwater runoff could cause soil erosion of disturbed areas. The BMPs required under the SWMP and SWPPP would be implemented to minimize soil erosion due to any ground cover loss. In addition, all construction work would meet the requirements of State of California building and structural codes and be performed in accordance with the recommendations in the geotechnical investigation conducted for the project.

Expansive soils may be present on or in the vicinity of the project site. Expansive soils beneath the proposed project's foundations could result in cracking and distress of foundations. Existing structures built on these sediments could be cracked and warped by such settlement. Caltrans foundation guidelines indicate where the peak ground acceleration is more than 0.6g, such as this site, the abutments and bent should be supported on pile foundations. The project would be constructed in compliance with the recommendations of the geotechnical engineer, consistent with implementation of regulations in the Los Angeles Municipal Code, and in conjunction with criteria established by Caltrans and would not result in substantial damage to structures or infrastructure or expose people to substantial risk of injury. Thus, the impacts from expansive soils would have no substantial adverse effects under NEPA or significant impacts under CEQA.

Operational Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, no modifications to geological settings and soils would occur. Therefore, the No-Build Alternative would not result in adverse effects under NEPA or significant impacts under CEQA related to geological conditions.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Seismicity

According to Exhibit A in the Safety Element of the City of Los Angeles General Plan, the project site is located within the boundaries of a fault rupture study area. There would be a minor increase in the exposure of people and property to seismic hazards relating to current and future baseline conditions. The project area lies in the vicinity of the Palos Verdes fault zone. Strands of the fault may pass beneath the perimeter and immediately west of the project area. Strong to intense ground shaking, surface rupture, and liquefaction could occur in these areas due to the location of the fault beneath the project area and the presence of water-saturated hydraulic fill. With the exception of ground rupture, similar seismic impacts could occur due to earthquakes on other regional faults. Earthquake-related hazards, such as liquefaction, ground rupture, ground acceleration, and ground shaking cannot be avoided in the Los Angeles region and in particular in the harbor area where the Palos Verdes fault is present and hydraulic and alluvial fill is pervasive.

The Los Angeles Building Code regulates construction in the City through building codes and criteria that provide requirements for construction, grading, excavation, use of fill, and foundation work, including requirements regarding types of materials, design, procedures, etc. These codes are intended to limit the probability of occurrence and the severity of consequences from geological hazards such as earthquakes. Necessary permits, plan checks, and inspections are also specified. The Los Angeles Municipal Code also incorporates structural seismic requirements of the California Uniform Building Code, which classifies almost all of coastal California (including the project site) as a Seismic Zone 4 (on a scale of 1 to 4, with 4 being most severe). The proposed project engineers would review the proposed project plans for compliance with the appropriate standards in the building codes.

As discussed above, seismic activity along the Palos Verdes fault zone, or other regional faults, could produce fault rupture, seismic ground shaking, liquefaction, or other seismically induced ground failure. Seismic hazards are common to the Los Angeles region and are not increased by the proposed project. However, because the project area is potentially underlain by strands of the active Palos Verdes fault and liquefaction-prone hydraulic fill, there is a substantial risk of seismic impacts. Seismic upgrades would be completed along with reconfiguration and construction of the new interchange and seismic retrofitting of the existing Union Oil undercrossing (Bridge No. 53-1033) as part of the proposed project. The proposed project would also consider seismic retrofitting for the existing anchor slab section of the retaining wall (No. 318) based on current design criteria. Thus, the proposed project would result in beneficial impacts. The proposed project would be carried out in an existing transportation corridor and would not result in any new traffic. Thus, it would not create new risks for people or structures related to seismic activities. As such, no substantial adverse effects under NEPA or significant impacts under CEQA would occur.

Tsunamis and Seiches

According to Exhibit G in the Safety Element of the City of Los Angeles General Plan (1996), a small portion of the project site is located within the boundaries of an area that could be affected by a tsunami. Local or distant seismic activity and/or offshore landslides could result in the occurrence of tsunamis or seiches within the project area and vicinity. Due to the depth of the port and the proximity of the West Basin to the Pacific Ocean, as well as the fact that the proposed project would be carried out along an existing transportation corridor and would not result in any new traffic, the proposed project would not expose people or structures to tsunami risks that would be any greater than the existing conditions. Thus, it would not create new risks for people or structures related to tsunami. As such, no adverse effects under NEPA or significant impacts under CEQA would occur.

Subsidence/Soil Settlement

Subsidence in the vicinity of the project site, due to previous oil extraction in the port area, has been mitigated and is not anticipated to adversely affect the proposed project. However, in the absence of proper engineering, proposed structures could be cracked and warped as a result of saturated, unconsolidated/compressible sediments. As such, during project design, the project engineer would evaluate the settlement potential in all areas where structures are proposed.

No substantial adverse effects under NEPA or significant impacts under CEQA would occur because the project would be designed and constructed in compliance with the recommendations of the geotechnical engineer, consistent with regulations of the Los Angeles Municipal Code, and in conjunction with criteria established by Caltrans. It would not result in substantial damage to structures or infrastructure or expose people to substantial risk of injury.

Expansive Soils

Impacts from expansive soil in the project area would be less than significant under CEQA and not substantially adverse under NEPA because the project would be designed and constructed in compliance with the recommendations of the geotechnical engineer, consistent with implementation of regulations in the Los Angeles Municipal Code, and in conjunction with criteria established by Caltrans. It would not result in substantial damage to structures or infrastructure or expose people to substantial risk of injury.

Landslides and Mudslides

The topography in the vicinity of the project site is flat and not subject to landslides or mudflows. In addition approach embankments would be designed to minimize any potential erosion hazards. The approach embankment slopes would be designed to be consistent with regulations in the Los Angeles Municipal Code and criteria established by Caltrans. The proposed project would maintain the existing condition for the retaining wall along the east side of the I-110 right-of-way. Therefore, no substantial adverse effects under NEPA or significant impacts under CEQA would occur.

Unstable Soil Conditions

Groundwater is locally present at depths as shallow as 10 feet. Materials near and below the shallow groundwater table would be relatively fluid, requiring implementation of standard engineering practices regarding saturated, collapsible soils, such as dredging, dewatering wells, and other special handling procedures to facilitate excavation. Various types of temporary shoring would also be used to stabilize excavations with saturated, collapsible soils. Such engineering practices would be implemented where necessary. As described in the *Foundation Report*, granular soils with low moisture contents in dry climates, such as that at the site, may be subjected to hydro collapse when inundated with water. One hydro collapse test performed on a medium-dense sand sample in one of the borings made for the *Preliminary Foundation Report* showed very low collapse potential (less than 1 percent). Based on the blow counts noted in the borings, the site soils at shallow depths are, in general, medium dense; therefore, the potential for hydro collapse is expected to be low to negligible.

No excavations would be taking place as a part of proposed project operations after construction has been completed; therefore, on-site soils would not be subject to collapse or caving. As such, no adverse effects under NEPA or significant impacts under CEQA would occur.

Prominent Geologic and Topographic Features

Since the project area is relatively flat and paved, with no prominent geologic or topographic features, proposed project operations would not result in any distinct and prominent geologic or topographic features being destroyed, permanently covered, or materially and adversely modified. The proposed project would not result in any adverse effects under NEPA or significant impacts under CEQA.

Avoidance, Minimization, and/or Mitigation Measures

All project components will be designed in accordance with standard engineering practices and Caltrans standard specifications. Since no substantial adverse effects under NEPA or significant impacts under CEQA would occur related to geology, soils, topography and seismicity, no avoidance, minimization, and/or mitigation measures are required.

2.2.4 Paleontology

Regulatory Setting

Paleontology is the study of life in past geologic time based on fossil plants and animals. A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized or funded projects (e.g., the Antiquities Act of 1906 [16 USC 431–433] and the Federal-Aid Highway Act of 1935 [20 USC 78]). Under California law, paleontological resources are protected by CEQA; the California Code of Regulations, Title 14, Division 3, Chapter 1, Sections 4307 and 4309; and Public Resources Code Section 5097.5.

Any rock material that contains fossils has the potential to yield fossils that are unique or significant to science. However, paleontologists consider geological formations having the potential to contain vertebrate fossils more “sensitive” than those likely to contain only invertebrate fossils. Invertebrate fossils found in marine sediments are usually not considered by paleontologists to be significant resources because the geological contexts in which they are encountered are widespread and fairly predictable. Invertebrate fossil species are usually abundant and well preserved; therefore, they are not unique. In contrast, vertebrate fossils are much rarer than invertebrate fossils and are often poorly preserved. Therefore, when found in a complete state, vertebrate fossils are more likely to be a more significant resource than are invertebrate fossils. As a result, geologic formations having the potential to contain vertebrate fossils are considered the most sensitive. Vertebrate fossil sites are usually found in non-marine upland deposits. Occasionally, vertebrate marine fossils such as whale, porpoise, seal, or sea lion can be found in marine rock units such as the Miocene Monterey Formation and the Pliocene Sisquoc Formations, which are known to occur throughout Central and Southern California.

Affected Environment

The proposed project APE is mapped geologically (Dibblee 1999) as being underlain in the central and southern extent by Quaternary alluvium and Quaternary older alluvium and by Malaga Mudstone at the northern end of the APE. Figures 2-6a through 2-6c show the APE for the proposed project. Late Pleistocene alluvium and older alluvial sand deposits such as those in the central and southern portion of the APE, between Harry Bridges Boulevard and C Street, are known to contain intact vertebrate fossils, which are considered fossils of regional, if not statewide, significance due to their rarity.

The Malaga Mudstone is the uppermost member in the Miocene-age Monterey Shale and consists of light chocolate-brown or olive-gray, massive, radiolarian mudstone and fine-grained siltstone (Woodring et al. 1946; Kennedy 1975). The Malaga Mudstone was deposited during the late Miocene, approximately 10 to 12 million years ago. In the project APE, the Malaga Mudstone member is overlain by shallow non-marine alluvial deposits and possibly artificial fill. Fossil localities are rare in the Malaga Mudstone but have been recorded from coastal sites in the Palos Verdes Hills. Woodring et al. (1946) described three fossil localities from the Malaga Mudstone, and there are fossils from 13 localities reported at the Natural History Museum of Los Angeles County (LACM) (Kennedy 1975; LACM online database). Fossils collected from these sites consist primarily of remains of open-marine microfossils, which include diatoms, foraminifera, radiolarians, and sponge spicules (Woodring et al. 1946; Kennedy 1975).

No field survey of the project site was conducted because the site is covered by extensive development and artificial fill. A paleontological record search identified a number of fossil sites (localities) within 0.5 mile of the project area in upland geological deposits (LSA Associates 1992; LAHD 1993).

Environmental Consequences

<u>Construction Impacts</u>

Alternative 1: No-Build Alternative

Since no construction activities are proposed under the No-Build Alternative, no adverse effects under NEPA or significant impacts under CEQA would occur with respect to paleontological resources.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

The geologic assessment and literature review demonstrate that grading and excavation in the proposed project APE have the potential to affect significant nonrenewable fossil resources. The central and southern portions of the project area contain a Late Pleistocene geological formation that is considered to have high sensitivity for paleontological resources due to the presence of a diverse array of vertebrate fossils that have been encountered previously within that deposit. This area of potential sensitivity is located at the western end of Harry Bridges Boulevard and C Street between Figueroa Street and I-110. Excavation into undisturbed geologic deposits underlying the project area, which include Quaternary alluvium, older Quaternary alluvium, and

Miocene-age marine deposits of Malaga Mudstone, could affect fossil resources. Project grading and excavation could adversely affect these unknown but potentially significant paleontological resources. Construction of the proposed project would result in adverse effects because of the potential to damage or destroy significant nonrenewable fossil resources. With implementation of mitigation measure PAL-1, there would be no substantial adverse effects under NEPA or significant impacts under CEQA.

Operational Impacts

Alternative 1: No-Build Alternative

The No-Build Alternative would not result in any changes to the existing operational conditions. Therefore, the No-Build Alternative would not result in any adverse effects under NEPA or significant impacts under CEQA on paleontological resources.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Once the construction has been completed, the proposed project would not result in any activities that have the potential to damage or destroy significant nonrenewable fossil resources.

Avoidance, Minimization, and/or Mitigation Measures

PAL-1 Develop a Program to Mitigate Impacts on Nonrenewable Paleontologic Resources Prior to Excavation or Construction of Any Proposed Project Components.

This mitigation measure shall be carried out by a qualified vertebrate paleontologist consistent with the proposed guidelines of the Society of Vertebrate Paleontology. This shall include the following:

1. An assessment of site-specific excavation plans to determine areas that shall be designated for paleontological monitoring during initial ground disturbance;
2. Development of monitoring protocols for these designated areas. Areas consisting of artificial fill materials shall not require monitoring. Paleontologic monitors who are qualified according to Society of Vertebrate Paleontology standards shall be equipped to salvage fossils as they are unearthed to avoid construction delays and remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced if some of the potentially fossiliferous units described herein are determined upon exposure and examination by qualified paleontologic personnel to have a low potential to contain fossil resources;

3. Preparation of all recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils are essential to mitigate adverse impacts on the resources fully;
4. Identification and curation of all specimens into an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA compliance (Scott and Springer 2003). The paleontologist shall have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts on significant paleontologic resources is not considered complete until such curation into an established museum repository has been fully completed and documented; and
5. Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate lead agency along with confirmation of the curation of recovered specimens into an established, accredited museum repository, shall signify completion of the program to mitigate impacts on paleontologic resources.

2.2.5 Hazardous Waste/Materials

Regulatory Setting

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste but also a variety of laws regulating air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include the following:

- Community Environmental Response Facilitation Act (CERFA) of 1992,
- Clean Water Act,
- Clean Air Act,
- Safe Drinking Water Act,
- Occupational Safety and Health Act,
- Atomic Energy Act,
- Toxic Substances Control Act (TSCA), and
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

Affected Environment

The key source for the data used in the preparation of this section is the *Phase I ISA* for the project site, completed in January 2007 (Group Delta Consultants 2007), and the *Phase II Hazardous Waste Investigation* for the project site, which was completed in March 2009 (Diaz Yourman & Associates 2009b).

Historical Records Review

The history of the project site was reviewed to supplement regulatory agency database records. Aerial photographs and topographic maps were also reviewed. Prior to development, the site consisted of an estuary of the Los Angeles River characterized by tidal lagoons, marshes, and mud flats and referred to as the Wilmington Lagoon. During the late 1800s through the mid-1920s, the shoreline near the site was approximately 300 feet south of Harbor Boulevard (present-day John S. Gibson and West Harry Bridges Boulevards). As a portion of Wilmington Lagoon was developed into the West Basin of the Port of Los Angeles in the early 20th century, the area south of the site was filled in with material dredged from the developing harbor. From the mid-1920s to the mid-1940s, the shoreline south of West Harry Bridges Boulevard gradually moved approximately 1,100 feet farther south as a result of dredge and fill operations.

Through the late 19th and early 20th centuries, the site was occupied by both commercial and residential properties. The oil refinery located on the west side of I-110 was constructed in the early 1920s, and the portion of I-110 on the western boundary of the site was constructed between 1948 and 1951 (Group Delta Consultants 2007).

Environmental Database Search

The ISA defines the subject property as the area extending approximately 1,000 feet south of the intersection of Figueroa Street and Harry Bridges Boulevard, approximately 1,000 feet east of the intersection of Figueroa Street and Harry Bridges Boulevard, and to the north along Figueroa Street up to the intersection of Figueroa Street and D Street. A computerized environmental information database search was performed by Environmental Data Resources (EDR) for the 1-mile radius area outside of the subject property. The search included federal, state, and local databases. The review was conducted to evaluate whether the site or properties within the vicinity of the site have been reported as having experienced substantial unauthorized releases of hazardous substances or other events with potentially adverse environmental effects. Numerous sites within the search area were recorded in the database. Six sites are located within the subject property alignment; two of them (No. 2 and No. 3 in the list below) are listings for the same site. The rest of the sites are located outside of the subject property and the area of the planned project improvements. The sites located within the subject property alignment include the following:

1. Los Angeles Bunker Surveyors, 239 Mar Vista Avenue. Formerly a small-quantity generator. No violations were reported. The site is being cleared out. This location is currently an empty lot.
2. Garin Oil Company #5, 302 North Figueroa Street. The address is located at the northeast corner of the intersection of C Street and Figueroa Street. The site was probably a gasoline station at one time, and there were underground storage tanks for diesel fuel. The site is currently under remediation.
3. Rocket #5, 302 North Figueroa Street (located at the same address as site No.2). Leaking of the underground gasoline tank was discovered in 1995 by subsurface monitoring. Testing of groundwater indicated a concentration of 2,200 parts per million (ppm) of dissolved benzene. MTBE was recorded in groundwater. In 2003, it was reported that the site cleanup was under way. Remediation at the site is ongoing.
4. Transit Contracts, 221 Mar Vista Avenue. Formerly a small-quantity generator with one underground fuel tank. No violations were found. The facility that occupied this location was a producer of solid and aqueous waste material. No soil or water contamination reported due to these processes. The site is currently an empty lot.
5. SOS Control Services, 225 Mar Vista Avenue. Formerly a small-quantity generator. No violations were found. The site is currently an empty lot.
6. Los Angeles Pumping Plant, 1220 West B Street. Formerly a small-quantity generator. No violations were found. The site is currently an empty lot.

Out of the six sites reported in the database to be located within the proposed project alignment area, the sites marked as No. 2 and No. 3 in the list above are the sites of a gasoline station, which is currently under remediation. This site is an environmental concern because it has likely contaminated the groundwater in the area; the soil contamination is being remediated. No violations were reported at the remaining four sites located within the subject property alignment.

Three sites located outside of the subject property improvement area are reported in the leaking underground storage tank (LUST) and Cortese database search. Two of them have the same address.

1. Yang Ming Container Terminal, 2050 John S. Gibson Boulevard. The address is located 0.15 mile south of the intersection of Harry Bridges Boulevard and Figueroa Street. Leaking at three underground diesel tanks was discovered in 2000 during tank repair. The groundwater and soil tested positive to MTBE. It was reported that the case was treated as a minor incident and no action was required. The leaking tanks were removed in 2000. The case was reportedly closed in 2004.

2. American President Lines, 2050 John S. Gibson Boulevard. The address is located 0.15 mile south of the intersection of Harry Bridges Boulevard and Figueroa Street. The site is listed in HIST UST database. Underground diesel tanks used to occupy the site. This is the same site as No. 1, above.
3. Dichter Lumber Sales, 220 Gulf Avenue. The address is located 0.4 mile east of the intersection of Harry Bridges Boulevard and Figueroa Street. Leaking of the underground tank was reported in 1992 when hydrocarbons and MTBE were recorded in the groundwater. It was not reported how the leak was discovered. The case was reportedly closed in 2004. A spill of petroleum was also reported at this site in the Spills, Leaks, Investigations, and Cleanups (SLIC) database. The case is open.

These three sites are located at approximately the same elevation as the subject property. The sites present a potential environmental concern due to potential residual contamination of the groundwater. In addition to the aforementioned sites, an oil refinery is located on the west side of the subject property alignment adjacent to southbound I-110. The refinery has been the subject of environmental investigations since the 1980s. It is recorded in several databases and should be considered an environmental concern because its operations have likely contaminated the groundwater in the area and downstream.

Site Reconnaissance

Site reconnaissance was conducted on October 10 and November 9, 2006, to assess and photograph present site conditions at the time of preparation of the ISA. The following observations were noted during site reconnaissance, which may suggest the presence of hazardous conditions at the project site:

- Piles of concrete and soil of an unknown source were observed on an empty lot located at the northeast corner of the intersection of Figueroa Street and Harry Bridges Boulevard;
- Debris, trash, and several buckets of discarded motor oil were found at the intersection of C Street and Mar Vista Avenue;
- Above-ground propane tanks and a treatment system were found at a site known to contain leaking underground storage tanks. The treatment system is a soil vapor extraction unit;
- Piled soil along the eastbound lane of Mar Vista Boulevard between C Street and Harry Bridges Boulevard. Observations in November 2006 found that the soil was being removed by City street maintenance personnel;
- Piles of oil-stained soil, oil-stained tire tracks, and oily water were observed along the west lane of King Avenue, near Harry Bridges Boulevard;
- Several pole-mounted transformers were noted to exist along the alignment; and
- Unpaved areas adjacent to I-110 are landscaped with plants. These areas are likely to contain aerially deposited lead (ADL) from gasoline emissions.

Former land uses deemed to contain hazardous materials adjacent to the project site include an oil refinery. Leaking underground storage tanks at or near the site and releases from the nearby refinery have likely affected groundwater conditions in the area of the project improvements. Additionally, vegetated landscaping at the project site and adjacent properties was likely treated with pesticides and herbicides during landscape maintenance. Groundwater at the project site may have been affected as a result.

Elevated concentrations of lead (from use of leaded gasoline) and other metals are sometimes associated with older roadways. Both C Street and I-110 were depicted in historical topographic maps from 1964 to present. Additionally, pole-mounted electric transformers have been known to contain PCBs. The pole-mounted transformers observed on site appeared to be in good condition, and no leaking was observed. Roadway structures, attached pipelines, and appurtenances may have asbestos-containing material (ACM) in the form of coatings, insulation, expansion joint compounds, and lead-based paint (LBP). The buildings along Figueroa Street may contain both ACM and LBP.

All the areas of excavation would require an investigation for total petroleum hydrocarbon contamination. Additionally, shallow soil (upper 2 feet) in unpaved areas will require an investigation for ADL and pesticides.

Phase II Hazardous Waste Investigation

A draft *Phase II Hazardous Waste Investigation* for the proposed project was completed in March 2009 (Diaz Yourman & Associates 2009b). The objectives of this Phase II investigation were to evaluate whether soil contamination in the right-of-way may affect construction activities and provide a hazard assessment for the mitigation of impacts during earthwork. Seventy soil samples from 15 locations were collected, tested, and analyzed for contamination. The results of the field investigation indicate subsurface conditions only at specific locations and times and only to the depths penetrated. This report included site reconnaissance conducted on October 9, 2008, as well as follow-up site visits for the sampling of ADL. Subsequent lab tests analyzed soil samples for the following chemicals of concern: ADL, hydrocarbons, pesticides, herbicides, polycyclic aromatic hydrocarbons (PAH), PCBs, asbestos, and other lead-containing materials. The Phase II report resulted in the following field observations and results from laboratory testing:

- Groundwater was not encountered in the shallow borings (less than 6 feet) during sampling excavations. Depth to groundwater could not be determined when drilling the deeper borings with the mud-rotary drilling method;
- None of the discrete soil samples tested had concentrations of lead that exceeded the regulatory total threshold limit concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg), but three samples exceeded the regulatory soluble threshold limit concentration (STLC) of 5 mg/L. The samples with STLC values greater than 5 mg/L were tested for toxicity characterization leaching procedure (TCLP). The results of the 11 tests performed were below the federal regulatory limit of 5 mg/L;
- The values of pH varied from 7 to 8.4. None of the discrete soil samples tested had pH levels less than 5;

- None of the discrete soil samples tested for Title 22 metals had concentrations that exceeded the regulatory TTLC values for hazardous waste specified in the California Code of Regulations Title 22, excluding lead. Other than lead, one sample had arsenic and copper values that were considered above background levels. A second sample had zinc values that were considered above background levels; and
- Based on the results of limited random environmental screening of soil samples obtained during the geotechnical engineering investigation, it appears there is the potential for subsurface soils at some locations to be affected by petroleum hydrocarbons. Based on the presence of high concentration of isopropylbenzene in one sample location, the hydrocarbons appear to be associated with the petroleum refinery located northwest (upgradient) of the project area.

Findings and recommendations

Based upon review of the data collected during the Phase II site assessment, the following recommendations have been made:

- The existing undisturbed soils are not considered potentially hazardous waste until the soils are excavated;
- There is the potential for deeper subsurface soils at some locations to be affected by petroleum hydrocarbons;
- Based on linear regression analysis and statistical analysis for the samples collected within the upper 2.5 feet, if the composite soil has an ADL TTLC greater than 100 mg/kg, the lead STLC will be greater than 6 mg/L. Because the STLC is greater than 5 mg/L, it should be classified in accordance with the California Code of Regulations Title 22 as hazardous waste. Most of the higher concentrations of ADL were within the upper 2.5 feet of soil; and
- The samples with STLC values of lead greater than 5 mg/L were tested for TCLP. The results of the four tests performed were below the federal regulatory limit of 5 mg/L. The four samples were located in the upper 3 feet of soil.

Environmental Consequences

Construction Impacts

Alternative 1: No-Build Alternative

Since no construction activities are proposed under the No-Build Alternative, no adverse effects under NEPA or significant impacts under CEQA would occur with respect to hazardous waste and materials.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Activities related to hazardous materials handling during construction of the project include refueling and servicing construction equipment on site, demolition of existing structures, and the removal and export of potentially contaminated soils from the site. These activities would be short-term or one-time events and subject to federal, state, and local health and safety requirements. All refuse, trash, and miscellaneous debris scattered across the project site would require collection and proper disposal. The proposed project could result in adverse effects under NEPA or significant impacts under CEQA without mitigation. However, implementation of mitigation measures HAZ-1 through HAZ-4, as well as compliance with state and federal laws regarding waste disposal, would ensure that the proposed project would not result in substantial adverse effects or significant impacts during the construction phase.

Operational Impacts

Alternative 1: No-Build Alternative

The No-Build Alternative would not result in any changes to existing operational conditions. Therefore, the No-Build Alternative would not result in any adverse effects under NEPA or significant impacts under CEQA due to hazards and hazardous materials.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Following construction of Alternative 2, operations are not expected to result in the creation of health hazards or expose people to potential health hazards because Alternative 2 is for roadway improvements only, and the storage of toxic materials or chemicals is not a component of the proposed project. The project is located in an area that services industrial goods transportation. Many of the vehicles using the interchange may contain materials deemed hazardous; however, these alternatives are not anticipated to increase the potential for vehicles carrying hazardous materials to travel in the project area or increase the potential for accidents to occur in the project area. The hazards associated with vehicular transport of hazardous waste are regulated under existing programs and would not be affected by Alternative 2. Thus, there would be no adverse effects under NEPA or significant impacts under CEQA in the operational phase.

Avoidance, Minimization, and/or Mitigation Measures

The following sections present mitigation measures and available BMPs for the proposed project. The appropriate BMPs will be chosen when the project needs are more specifically defined.

HAZ-1 To reduce the aerially deposited lead levels in the composite soil that shall remain on site, the upper 2.5 feet of soil adjacent to the existing roadways within a 150-foot radius of boring B-10 shall be removed and disposed off site as hazardous waste. The recommended depths of removal for the site are displayed graphically in the ISA. The ultimate extent of the excavation shall consist of the area bound by the existing edge of pavement and the limits of the excavation as shown on the plans, as deemed necessary for construction or as directed by the engineer. Upon completion of the recommended removals (within a 150-foot radius of boring B-10), the revised linear regression analysis of the composite of the upper 2.5 feet of soil remaining on site shall have a

TTLC of less than 55 mg/kg and STLC of less than 5 mg/L, thereby clearing restrictions on the reuse of the remaining soil within the project limits.

HAZ-2 Soils from deep excavations (greater than approximately 6 feet, particularly for CIDH pile foundation excavations) shall be stockpiled and secured as potential regulated waste pending environmental evaluation and laboratory testing to determine appropriate disposal or reuse of the excavated soils.

HAZ-3 Waste with TTLC levels greater than 1,000 mg/kg or STLC levels greater than 5 mg/L are in excess of California hazardous waste criteria and must be disposed of in a Class I hazardous waste landfill. In addition, waste with TTLC levels greater than 5 mg/L are in excess of federal hazardous waste criteria and must be disposed of in a Class I hazardous waste landfill. A remediation specialist should be consulted for options other than disposal off site.

HAZ-4 The contractor shall prepare a project-specific lead compliance plan to prevent or minimize worker exposure to lead while handling material containing ADL. Attention is directed to Title 8, California Code of Regulations, Section 1532.1, “Lead,” for specific California Department of Industrial Relations, Division of Occupational Safety and Health Administration (OSHA), requirements when working with lead.

A construction health and safety program should be prepared, including provisions for worker awareness, dust control procedures, and air quality monitoring for lead contained in airborne particulate. All site excavation, as well as construction activities, would be completed according to OSHA standards (29 CFR 1926.62, Appendix A) for workers exposed to lead through inhalation and conducted by an abatement company certified by the State of California Department of Health Services. With these mitigation measures, the proposed project would ensure impacts during construction or operations would remain below adverse/significant levels.

2.2.6 Air Quality

The following technical reports were reviewed in preparation of this document:

- *Interstate 110/C Street Interchange Air Quality Study Report*, ICF International 2011;
- *Transportation Conformity Guidance for Qualitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas*, Federal Highway Administration and U.S. Environmental Protection Agency 2006;
- *Interim Guidance Update on Mobile-Source Air Toxic Analysis in NEPA Documents*, Federal Highway Administration 2009a; and
- *Transportation Project-level Carbon Monoxide Protocol*, Garza et al. 1997.

The *Interstate 110/C Street Interchange Air Quality Study Report* (AQSR) (ICF International 2011) provides a comprehensive description of the affected environment, including the regulatory setting, physical setting, and the project area's attainment status, relevant pollutants, and sensitive receptors. A discussion of this information is provided below.

Regulatory Setting

Federal Standards

The Federal Clean Air Act (FCAA) as amended in 1990 is the federal law that governs air quality. The California Clean Air Act of 1988 is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and California Air Resources Board (ARB), set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and State ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns. The criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM, broken down for regulatory purposes into particles of 10 micrometers or smaller – PM10 and particles of 2.5 micrometers and smaller – PM2.5), lead (Pb), and sulfur dioxide (SO_2). In addition, State standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H_2S), and vinyl chloride. The NAAQS and State standards are set at a level that protects public health with a margin of safety, and are subject to periodic review and revision. Both State and Federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics within their general definition.

Transportation Conformity

Federal and State air quality standards and regulations provide the basic scheme for project-level air quality analysis under the NEPA and CEQA. In addition to this type of environmental analysis, a parallel "Conformity" requirement under the FCAA also applies.

FCAA Section 176(c) prohibits the U.S. Department of Transportation and other Federal agencies from funding, authorizing, or approving plans, programs or projects that are not first found to conform to State Implementation Plan (SIP) for achieving the goals of Clean Air Act requirements related to the NAAQS. "Transportation Conformity" takes place on two levels: the regional, or planning and programming, level, and the project level. The proposed project must conform at both levels to be approved. Conformity requirements apply only in nonattainment and "maintenance" (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 CFR 93 govern the conformity process.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the standards set for CO, NO_2, O_3, PM10 and PM2.5, and in some areas sulfur dioxide SO_2. California has attainment or maintenance areas for all of these transportation-related "criteria pollutants" except SO_2, and also has a nonattainment area for Pb. However, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all of the transportation projects planned for a region over a period of at least 20 years for the RTP) and

4 years (for the FTIP). RTP and FTIP conformity is based on use of travel demand and air quality models to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that requirements of the Clean Air Act and the SIP are met. If the conformity analysis is successful, the MPO, FHWA, and FTA, make determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept, scope, and "open to traffic" schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Conformity at the project-level also requires "hot spot" analysis if an area is "nonattainment" or "maintenance" for CO and/or PM10 or PM2.5. A region is "nonattainment" if one or more of the monitoring stations in the region measures violation of the relevant standard and U.S. EPA officially designates the area nonattainment. Areas that were previously designated as nonattainment areas but subsequently meet the standard may be officially redesignated to attainment by U.S. EPA and are then called "maintenance" areas. "Hot spot" analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA purposes. Conformity does include some specific procedural and documentation standards for projects that require a hot spot analysis. In general, projects must not cause the "hot spot"-related standard to be violated, and must not cause any increase in the number and severity of violations in nonattainment areas. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

Affected Environment

Unless otherwise noted, the information in this section was synthesized from the AQSR prepared for the proposed project (ICF International 2011).

Ambient air quality is affected by climatological conditions, topography, and the types and amounts of pollutants emitted. The following discussion describes the relevant characteristics of the Basin and offers an overview of the conditions that affect ambient air concentrations of pollutants. A detailed description of the ambient pollutants for which there are standards, as well as mobile-source air toxics (MSATs)/toxic air contaminants (TACs) and naturally occurring asbestos (NOA), is provided in the AQSR.

Climate and Topography

The Basin is a coastal plain with connecting broad valleys and low hills that covers an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties as well as the San Gorgonio Pass area in Riverside County. Terrain and geographical location determine the distinctive climate of the Basin.

Table 2-40: Ambient Air Quality Standards Applicable in California and the Attainment Status of the South Coast Air Basin

Pollutant	Averaging Time	State [9] Standard	Federal [9] Standard	Principal Health and Atmospheric Effects	Typical Sources	Attainment Status
Ozone (O_3)[2]	1 hour 8 hours 8 hours (conformity process [5])	0.09 ppm 0.070 ppm ---	--- [4] 0.075 ppm [6] 0.08 ppm (4th highest in 3 years)	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic VOC may also contribute.	Low-altitude ozone is almost entirely formed from reactive organic gases/volatile organic compounds (ROG or VOC) and nitrogen oxides (NOx) in the presence of sunlight and heat. Major sources include motor vehicles and other mobile sources, solvent evaporation, and industrial and other combustion processes.	Federal: Extreme nonattainment (8 hours) State: Extreme nonattainment (1 hour); Nonattainment (8 hours)
Carbon Monoxide (CO)	1 hour 8 hours 8 hours (Lake Tahoe)	20 ppm 9.0 ppm [1] 6 ppm	35 ppm 9 ppm ---	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.	Federal: Attainment-maintenance (1 hour and 8 hours) State: Attainment (1 hour and 8 hours)
Respirable Particulate Matter (PM_{10}) [2]	24 hours Annual	50 µg/m³ 20 µg/m³	150 µg/m³ --- [2]	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many aerosol and solid compounds are part of PM_{10}.	Dust- and fume-producing industrial and agricultural operations; combustion smoke; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources (wind-blown dust, ocean spray).	Federal: Serious nonattainment State: Nonattainment
Fine Particulate Matter ($PM_{2.5}$) [2]	24 hours Annual 24 hours (conformity process [5])	--- 12 µg/m³ ---	35 µg/m³ 15.0 µg/m³ 65 µg/m³ (4th highest in 3 years)	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant – is in the $PM_{2.5}$ size range. Many aerosol and solid compounds are part of $PM_{2.5}$.	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical (including photochemical) reactions involving other pollutants including NOx, sulfur oxides (SOx), ammonia, and ROG.	Federal: Nonattainment State: Nonattainment

Pollutant	Averaging Time	State [9] Standard	Federal [9] Standard	Principal Health and Atmospheric Effects	Typical Sources	Attainment Status
Nitrogen Dioxide (NO_2)	1 hour Annual	0.18 ppm 0.030 ppm	0.100 ppm [7] (98th percentile over 3 years) 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain. Part of the "NOx" group of ozone precursors.	Motor vehicles and other mobile sources; refineries; industrial operations.	Federal: Attainment-Maintenance (1 hour and annual) State: Nonattainment (1 hour and annual)
Sulfur Dioxide (SO_2)	1 hour 3 hours 24 hours Annual	0.25 ppm --- 0.04 ppm ---	0.075 ppm [8] (98th percentile over 3 years) 0.5 ppm 0.14 ppm 0.030 ppm	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.	Federal: Attainment-Unclassified (1 hour) State: Attainment (1 hour and annual)
Lead (Pb)[3]	Monthly Quarterly Rolling 3-month average	1.5 µg/m³ --- ---	--- 1.5 µg/m³ 0.15 µg/m³	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from gasoline may exist in soils along major roads.	Federal: Attainment-unclassified (3-month average and quarter) State: Nonattainment (monthly)
Sulfate	24 hours	25 µg/m³	---	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.	State Only: Attainment
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm	---	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea.	Industrial processes such as: refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.	State Only: Unclassified

Pollutant	Averaging Time	State [9] Standard	Federal [9] Standard	Principal Health and Atmospheric Effects	Typical Sources	Attainment Status
Visibility Reducing Particles (VRP)	8 hours	Visibility of 10 miles or more (Tahoe: 30 miles) at relative humidity less than 70%	---	Reduces visibility. Produces haze. NOTE: not related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other "Class I" areas.	See particulate matter above.	State Only: No information available
Vinyl Chloride[3]	24 hours	0.01 ppm	---	Neurological effects, liver damage, cancer. Also considered a toxic air contaminant.	Industrial processes	State Only: Unclassified

Notes: ppm = parts per million; μg/m^3 = micrograms per cubic meter; ppb=parts per billion (thousand million)

[1] Rounding to an integer value is not allowed for the State 8-hour CO standard. Violation occurs at or above 9.05 ppm. Violation of the Federal standard occurs at 9.5 ppm due to integer rounding.

[2] Annual PM_{10} NAAQS revoked October 2006; was 50 μg/m^3. 24-hr. $PM_{2.5}$ NAAQS tightened October 2006; was 65 μg/m^3. In 9/09 U.S. EPA began reconsidering the $PM_{2.5}$ NAAQS; the 2006 action was partially vacated by a court decision.

[3] The ARB has identified vinyl chloride and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM_{10} and, in larger proportion, $PM_{2.5}$. Both the ARB and U.S. EPA have identified lead and various organic compounds that are precursors to ozone and $PM_{2.5}$ as toxic air contaminants. There are no exposure criteria for adverse health effect due to toxic air contaminants, and control requirements may apply at ambient concentrations below any criteria levels specified above for these pollutants or the general categories of pollutants to which they belong. Lead NAAQS are not required to be considered in Transportation Conformity analysis.

[4] Prior to 6/2005, the 1-hour NAAQS was 0.12 ppm. The 1-hour NAAQS is still used only in 8-hour ozone early action compact areas, of which there are none in California. However, emission budgets for 1-hour ozone may still be in use in some areas where 8-hour ozone emission budgets have not been developed.

[5] The 65 μg/m^3 $PM_{2.5}$ (24-hr) NAAQS was not revoked when the 35 μg/m^3 NAAQS was promulgated in 2006. Conformity requirements apply for all NAAQS, including revoked NAAQS, until emission budgets for the newer NAAQS are found adequate or SIP amendments for the newer NAAQS are completed.

[6] As of 9/16/09, U.S. EPA is reconsidering the 2008 8-hour ozone NAAQS (0.075 ppm); U.S. EPA is expected to tighten the primary NAAQS to somewhere in the range of 60-70 ppb and to add a secondary NAAQS. U.S. EPA plans to finalize reconsideration and promulgate a revised standard by August 2010.

[7] Final 1-hour NO_2 NAAQS published in the Federal Register on 2/9/2010, effective 3/9/2010. Initial nonattainment area designations should occur in 2012 with conformity requirements effective in 2013. Project-level hot spot analysis requirements, while not yet required for conformity purposes, are expected.

[8] U.S. EPA finalized a 1-hour SO_2 standard of 75 ppb in June 2010.

[9] State standards are "not to exceed" unless stated otherwise. Federal standards are "not to exceed more than once a year" or as noted above.

Sources: California Air Resources Board 2010a; California Air Resources Board 2010b; U.S. Environmental Protection Agency 2010a.

The greatest air pollution effects in the Basin occur from June to September. This condition is generally attributed to large amounts of pollutant emissions, light winds, and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, thereby causing elevated air pollution levels. Pollutant concentrations in the Basin vary with location, season, and time of day. Ozone concentrations, for example, tend to be low along the coast, high in the near inland valleys, and low in the far inland areas of the Basin and adjacent desert (ICF International 2009).

The project site is located in the Harbor District of Los Angeles. The average project-area summer (August) high and low temperatures are 79°F and 62°F, respectively. The average project-area winter (January) high and low temperatures are 66°F and 46°F, respectively. Annual average rainfall for the project area is 1.23 inches (Weather Channel 2009). Wind patterns in the project area display a unidirectional flow, with winds rising primarily from the west at an average speed of just under 4 mph. Calm wind conditions occur 17.48 percent of the time (Servin 2003).

Existing Air Quality Conditions

Existing air quality conditions in the project area can be characterized according to the ambient air quality standards that the federal and state governments have established for the various pollutants (see Table 2-40) and data collected in the region. Monitored data concentrations are typically expressed in terms of parts per million or micrograms per cubic meter ($\mu g/m^3$). The nearest monitoring station to the project site is the North Long Beach monitoring station, located approximately 6 miles away. The North Long Beach monitoring station is located at 3648 North Long Beach Boulevard in Long Beach, California (California Air Resources Board 2006). This station is also most representative of the project site.

Current cross-street ADT in the vicinity of the North Long Beach monitoring station is 10,000. According to interim-year data provided by the traffic engineering firm for the project area, anticipated cross-street ADT in 2014 will be between 9,701 and 20,074 (Iteris 2009b). It is assumed that cross-street ADT in the project area under existing conditions is significantly lower than the 2014 numbers because projected 2014 ADT takes background traffic growth into consideration. Traffic counts at the North Long Beach monitoring station are similar to traffic counts at the project site.

The monitoring station and the project site experience similar meteorological conditions because of their proximity to the Pacific Ocean. The predominant wind direction at the North Long Beach monitoring station is from the southwest (California Air Resources Board 2006). Los Angeles Harbor, which is near the project site, is located southwest of the monitoring station. Therefore, it is expected that air pollutants originating from Los Angeles Harbor would be blown in the direction of the monitoring station.

The North Long Beach monitoring station is approximately 0.4 mile north of the Interstate 405 (I-405) interchange at Long Beach Boulevard. The project site is adjacent to I-110. According to Caltrans' Traffic Data Branch, ADT near the I-405 interchange at Long Beach Boulevard ranges from 282,000 to 284,000 (California Department of Transportation 2008), while the highest ADT on I-110 near the C Street interchange is estimated to be 82,609 (California Department of Transportation 2009; Iteris 2009b). The numbers clearly indicate that I-405 experiences significantly higher ADT than I-110 (approximately 29 percent higher).

Air quality monitoring data from the North Long Beach station are summarized in Table 2-38. The air quality monitoring data are from 2007 to 2009, the last 3 years for which complete data are available.

As shown in Table 2-41, the North Long Beach monitoring station has experienced one violation of the state 8-hour ozone standard (2008), no violations of the state 1-hour ozone standard or the federal 8-hour ozone standard, no violations of the federal or state CO standards, four violations of the state 24-hour PM10 standard (2008 and 2009), no violations of the state 24-hour PM10 standard, and 14 violations of the federal 24-hour standard for particulate matter less than or equal to 2.5 microns in diameter (PM2.5) during the 3-year monitoring period.

Table 2-41: Ambient Air Quality Monitoring Data Measured at the North Long Beach Monitoring Station

Pollutant Standards	2008	2009	2010
1-Hour Ozone			
Maximum 1-hour concentration (ppm)	0.093	0.089	0.068
1-hour California designation value	0.09	0.09	0.09
1-hour expected peak-day concentration	0.086	0.087	—
Number of days standard exceeded[a]			
CAAQS 1-hour (> 0.09 ppm)	0	0	0
8-Hour Ozone			
National maximum 8-hour concentration (ppm)	0.074	0.067	0.055
National second-highest 8-hour concentration (ppm)	0.066	0.066	0.054
State maximum 8-hour concentration (ppm)	0.074	0.067	0.055
State second-highest 8-hour concentration (ppm)	0.067	0.067	0.054
8-hour national designation value	0.059	0.061	0.058
8-hour California designation value	0.068	0.068	0.074
8-hour expected peak-day concentration	0.070	0.072	—
Number of days standard exceeded[a]			
NAAQS 8-hour (> 0.075 ppm)	0	0	0
CAAQS 8-hour (> 0.070 ppm)	1	0	0
Carbon Monoxide (CO)			
National[b] maximum 8-hour concentration (ppm)	2.49	2.17	2.07
National[b] second-highest 8-hour concentration (ppm)	2.49	2.14	1.70
California[c] maximum 8-hour concentration (ppm)	2.49	2.17	2.07
California[c] second-highest 8-hour concentration (ppm)	2.49	2.14	1.70
Maximum 1-hour concentration (ppm)	3.3	—	—
Second-highest 1-hour concentration (ppm)	3.0	—	—
Number of days standard exceeded[a]			
NAAQS 8-hour (≥ 9.0 ppm)	0	0	0
CAAQS 8-hour (≥ 9.0 ppm)	0	0	0
NAAQS 1-hour (≥ 35 ppm)	0	0	0
CAAQS 1-hour (≥ 20 ppm)	0	0	0
Particulate Matter (PM10)[d]			
National[b] maximum 24-hour concentration ($\mu g/m^3$)	62.0	62.0	35.5

Pollutant Standards	2008	2009	2010
National[b] second-highest 24-hour concentration (μg/m³)	45.0	56.0	33.2
State[c] maximum 24-hour concentration (μg/m³)	61.0	62.0	—
State[c] second-highest 24-hour concentration (μg/m³)	45.0	55.0	—
State annual average concentration (μg/m³)[e]	—	30.2	—
Number of days standard exceeded[a]			
NAAQS 24-hour (> 150 μg/m³)[f]	0	0	0
CAAQS 24-hour (> 50 μg/m³)[f]	1	3	—
Particulate Matter (PM2.5)			
National[b] maximum 24-hour concentration (μg/m³)	57.2	63.0	—
National[b] second-highest 24-hour concentration (μg/m³)	45.4	40.9	—
State[c] maximum 24-hour concentration (μg/m³)	57.2	63.0	—
State[c] second-highest 24-hour concentration (μg/m³)	45.4	40.9	—
National annual designation value (μg/m³)	14.3	13.9	—
National annual average concentration ((g/m³)	14.1	12.9	—
State annual designation value ((g/m³)	—	—	—
State annual average concentration ((g/m³)[e]	—	—	—
Number of days standard exceededa			
NAAQS 24-hour (> 35 (g/m³)	8	6	0

Notes:

CAAQS = California Ambient Air Quality Standards.
NAAQS = National Ambient Air Quality Standards.
— = insufficient data available to determine the value.

[a] An exceedance is not necessarily a violation.

[b] National statistics are based on standard conditions data. In addition, national statistics are based on samplers, using federal reference or equivalent methods.

[c] State statistics are based on local conditions data, except in the South Coast Air Basin; statistics there are based on standard conditions data. In addition, state statistics are based on California-approved samplers.

[d] Measurements are usually collected every 6 days.

[e] The state criteria for ensuring that the data are complete for calculating valid annual averages are more stringent than the national criteria.

[f] Mathematical estimate of how many days concentrations would have been measured as higher than the level of the standard had each day been monitored.

Sources: California Air Resources Board 2009; U.S. Environmental Protection Agency 2009a.

Attainment Status

EPA has classified the Basin as an extreme nonattainment area for the 8-hour ozone standard, an attainment-maintenance area for both the 1- and 8-hour CO standards, a serious nonattainment area for the 24-hour PM10 standard, and a nonattainment area for both the annual arithmetic mean and the 24-hour PM2.5 standards.

CARB has classified the Basin as an extreme nonattainment area for the 1-hour ozone standard and a nonattainment area for the 8-hour standard, an attainment area for both the 1- and 8-hour CO standards, a nonattainment area for both the annual arithmetic mean and the 24-hour PM10 standards, and a nonattainment area for the annual arithmetic mean PM2.5 standard.

The Basin's attainment status for each of these pollutants relative to the NAAQS and CAAQS is provided in Table 2-40.

Sensitive Receptors

The South Coast Air Quality Management District (SCAQMD) defines a sensitive receptor as a person in the population who is particularly susceptible to health problems resulting from exposure to air pollutants (e.g., persons at schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, hospitals, retirement homes, or residences) (South Coast Air Quality Management District 2005a). Within the vicinity of the project area, sensitive receptors include persons at the single-family residences along Figueroa Street; students at Hawaiian Elementary School, located near the intersection of Hawaiian Avenue and E Street (about 0.2 mile from the project site); and children at Robert F. Kennedy Head Start, located near the intersection of Figueroa Street and D Street (less than 100 feet from the project site). Refer to Figure 2-10, below, for the locations of sensitive receptors.

Methodology and Environmental Consequences

The proposed project would generate operational and construction-related emissions. The methodology used to evaluate operational and construction effects is described below.

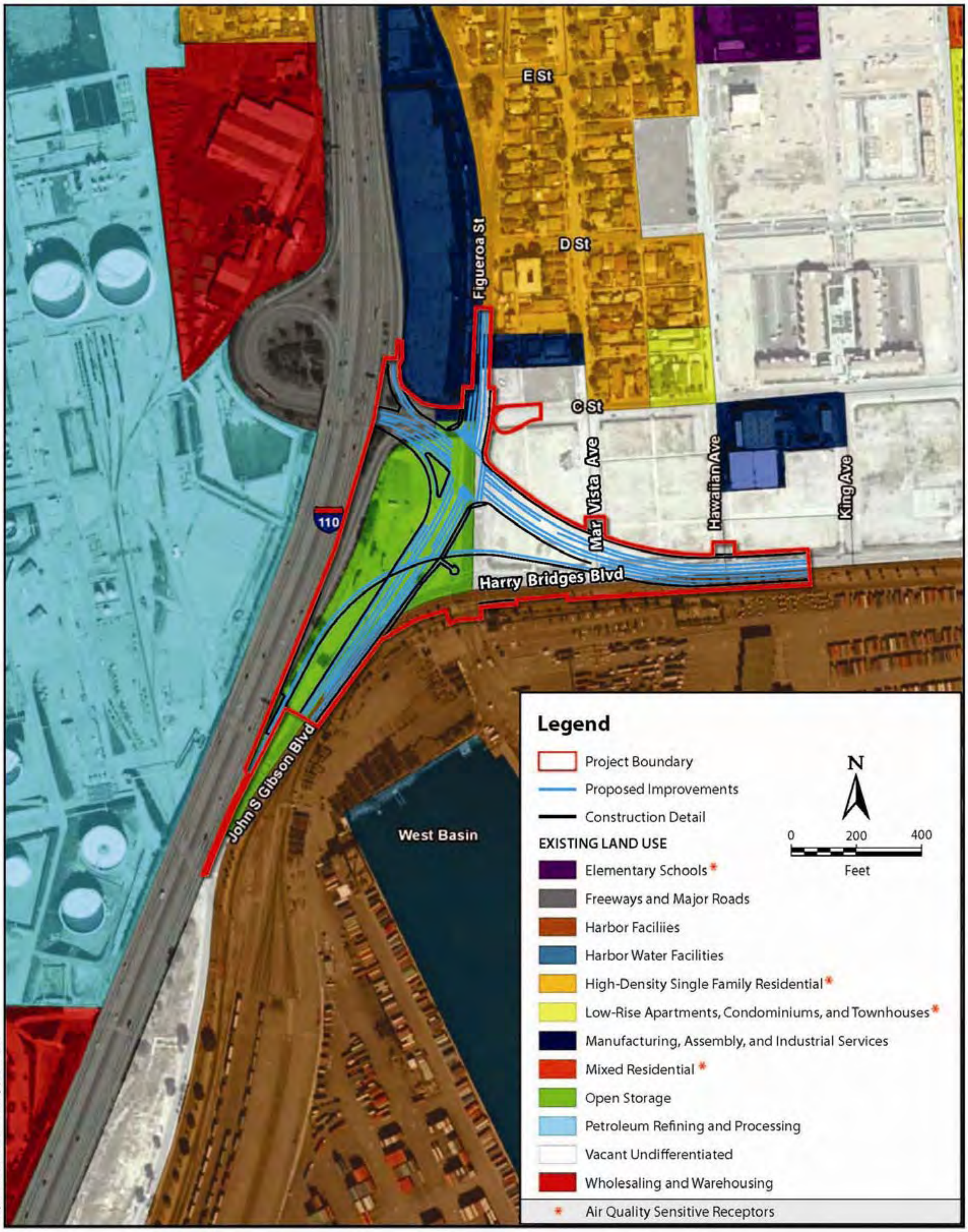
Construction Impacts

Construction is a source of fugitive dust and exhaust emissions that can have substantial temporary effects on local air quality (i.e., exceed state air quality standards for PM2.5 and PM10). Such emissions would result from earthmoving and the use of heavy equipment as well as land clearing, ground excavation, cut-and-fill operations, and the construction of roadways. Dust emissions can vary substantially from day to day, depending on the level of activity, the specific operations, and the prevailing weather.

Alternative-1: No-Build Alternative

Under the No-Build Alternative, there would be no changes to existing conditions at the project site; therefore, there would be no construction-related effects.

Figure 2-10: Air Quality Sensitive Receptors



Alternative-2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Construction projects lasting less than 5 years are not anticipated to result in adverse air quality effects; given this NEPA determination, FHWA and Caltrans do not require quantification of construction emissions when the construction period for a project is less than 5 years. Because construction of the proposed project would last for approximately 23 months, emissions resulting from construction were not quantified. However, LAHD, as the local sponsor and the responsible agency for the proposed project, requires a quantitative analysis for all of its projects. Therefore, a quantitative construction impact analysis is provided in Appendix H3, Impact Analyses Required for LAHD as the Responsible Agency.

Potential Generation of Adverse Construction-Related Emissions of Ozone Precursors, Carbon Monoxide, and Particulate Matter. The following discussion provides a qualitative analysis of the construction emissions expected to result from the proposed project, in accordance with Caltrans' Standard Environmental Reference (California Department of Transportation 2010).

Construction is anticipated to last from November 2012 to October 2014, a period of approximately 23 months. Therefore, the proposed project is exempt from federal transportation conformity requirements because construction activities would not occur for more than 5 years.

During construction, short-term degradation of air quality may occur because of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment also are anticipated and would include CO, NO_X, ROG, directly emitted particulate matter (PM10 and PM 2.5), and toxic air contaminants (aka MSATs) such as diesel exhaust particulate matter. Furthermore, ozone is a regional pollutant that is derived from NO_X and ROG in the presence of sunlight and heat.

Site preparation and roadway construction would involve clearing, cut-and-fill activities, grading, removing or improving existing roadways, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. If not properly controlled, these activities would temporarily generate PM10, PM2.5, and small amounts of CO, SO_2, NO_X, and ROG. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soil. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. PM10 emissions would vary from day to day, depending on the nature and magnitude of construction activity as well as local weather conditions. PM10 emissions would depend on soil moisture, the silt content of the soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over great distances from the construction site.

In addition to dust-related PM10 emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_X, ROG, and some soot particulate (PM10 and PM2.5) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while vehicles are delayed. However, such emissions would be temporary and limited to the immediate area surrounding the construction site.

SO_2 is generated by oxidation during the combustion of organic sulfur compounds contained in diesel fuel. Off-road diesel fuel meeting federal standards can contain up to 5,000 ppm of sulfur, whereas on-road diesel is restricted to less than 15 ppm of sulfur. However, under California law and CARB regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel. Therefore, SO_2-related issues due to diesel exhaust would be minimal.

Some phases of construction, particularly asphalt paving, would result in short-term odors in the immediate area of the paving sites. Such odors would be quickly dispersed below detectable thresholds as distance from the site increases.

Pursuant Caltrans' Standard Specifications, Section 14-9.01, the construction contractor will be required to comply with and adhere to all applicable rules and regulations, such as SCAQMD Rule 401 for visible emissions control, Rule 402 for nuisance, Rule 403 for fugitive dust control, Rule 1113 for control of VOC emissions from asphalt operations, Rule 1403 for limiting asbestos emissions, and other pertinent requirements concerning the operation of construction equipment and dust control. Table 2-42 summarizes the applicable measures required by Rule 403. Implementation of these control measures would reduce uncontrolled fugitive dust emissions by approximately 50 percent.

Construction activities for large development projects are estimated by EPA to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions would be reduced by up to 50 percent. Caltrans' Standard Specifications, Section 14-9.02,[30] will reduce uncontrolled fugitive dust emissions during construction.

Furthermore, the LAHD has developed Sustainable Construction Guidelines for reducing air emissions from all LAHD-sponsored construction projects. The Guidelines include the use of BMPs to reduce or eliminate environmental impacts from construction activities.

With implementation of the LAHD Sustainable Construction Guidelines for Reducing Air Emissions as well as applicable specifications, rules, and regulations during the project construction phase, impacts from air pollutant emissions during project construction would not be substantial.

[30] Section 14-9.02 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are contained in Section 18.

Table 2-42: South Coast Air Quality Management District's Best Available Control Measures

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	Mix backfill soil with water prior to moving Dedicate water truck or high-capacity hose to backfilling equipment Empty loader bucket slowly so that no dust plumes are generated Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	Maintain live perennial vegetation where possible Apply water in sufficient quantities to prevent the generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	Use of high-pressure air to clear forms may cause exceedance of rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	Follow permit conditions for crushing equipment Pre-water material prior to loading into crusher Monitor crusher emissions opacity Apply water to crushed material to prevent dust plumes
Cut and fill	05-1 Pre-water soils prior to cut-and-fill activities; and 05-2 Stabilize soil during and after cut-and-fill activities.	For large sites, pre-water with sprinklers or water trucks and allow time for penetration Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind-erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with SCAQMD Rule 1403.	Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures.	Limit vehicular traffic and disturbances on soils where possible If interior block walls are planned, install as early as possible Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

Source Category	**Control Measure**	**Guidance**
Earthmoving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Reapply water as necessary to maintain soils in a damp condition and ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earthmoving activities are complete.	Grade each project phase separately, timed to coincide with construction phase Upwind fencing can prevent material movement on site Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least 6 inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with California Vehicle Code Section 23114.	Use tarps or other suitable enclosures on haul trucks Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage Comply with track-out prevention/mitigation requirements Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes.	Apply water to materials to stabilize Maintain materials in a crusted condition Maintain effective cover over materials Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes Hydroseed prior to rainy season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	Dedicate water truck or high-capacity hose to screening operation Drop material through the screen slowly and minimize drop height Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	Limit size of staging area Limit vehicle speeds to 15 miles per hour Limit number and size of staging area entrances/exits

Source Category	Control Measure	Guidance
Stockpiles/bulk material handling	14-1 Stabilize stockpiled materials; and 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than 8 feet in height or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	Add or remove material from the downwind portion of the storage pile Maintain storage piles to avoid steep sides or faces
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	Apply gravel/paving to all haul routes as soon as possible to all future roadway areas Barriers can be used to ensure vehicles are used only on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches, soak soils via the pre-trench, and resume trenching Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds 6 inches (California Vehicle Code 23114).	Empty loader bucket such that no visible dust plumes are created Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	Haul waste material immediately off site
Unpaved roads/parking lots	19-1 Stabilize soils to meet the applicable performance standards; and 19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
Vacant land	20-1 In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more and are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking, and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees, or other effective control measures.	
Source: South Coast Air Quality Management District 2005b.		

Potential Generation of Adverse Construction-Related Toxic Air Contaminants. The greatest potential for TAC emissions would be related to diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk.

Individual cancer risk is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the construction schedule of 23 months, and considering that most grading and excavation activities would occur intermittently during different construction phases, the proposed project would not result in a long-term (i.e., 70 years) substantial source of TAC emissions, with no residual emissions after construction and corresponding individual cancer risk.

Potential Odors during Construction. During project construction, potential sources of objectionable odors would be related to the operation of diesel-powered equipment and to off-gas emissions during road-building activities, such as paving and asphalting. Such odors, however, would be short-term and limited to the area where the specific activity is occurring. The perception of these odors is dependent upon climatic conditions such as temperature, humidity, wind speed, and wind direction. Furthermore, SCAQMD Rule 1113 (Architectural Coatings) limits the amount of volatile organic compounds (VOCs) from paving, asphalt, concrete curing, and cement coatings operations. Construction of the proposed project would be performed in compliance with SCAQMD Rules, which limit VOC emissions. In addition, construction activities would be located within fenced, secured sites as far from receptors as feasible, with no public access. Due to the relatively short-term nature of construction odors, controlled access, and the distance to the nearest receptors, odors are not likely to affect a substantial number of people.

Operational Impacts

Alternative-1: No-Build Alternative

Under the No-Build Alternative, there would be no changes to existing conditions at the project site; therefore, a regional conformity analysis or a project-level conformity analysis is not required. Due to no changes to existing conditions, the alternative would also not result in project-related emissions of MSATs or operational emissions.

Alternative-2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Regional Transportation Conformity

Conformity with the RTP. The proposed project is listed in the 2008 Regional Transportation Plan, making the Connections financially constrained Regional Transportation Plan under Project ID# LA0F030 (I-110 Freeway/C Street Interchange Improvements—Modification of Existing Interchange) (Southern California Association of Governments 2008a) which was found to conform by SCAG on May 8, 2008 (U.S. Department of Transportation 2008a), and FHWA and

FTA made a regional conformity determination on November 17, 2008 (U.S. Department of Transportation 2008a). The project is also included in SCAG's financially constrained 2008 Regional Transportation Improvement Program Project ID# LA0F030 (Project Will Improve Flow of Traffic from I-110 Freeway On-/Off-Ramps at C Street by Consolidating Two Closely Spaced Intersections into One) (Southern California Association of Governments 2008b), page 70. The SCAG Regional Transportation Improvement Program was determined to conform by FHWA and FTA on November 17, 2008 (U.S. Department of Transportation 2008a). The design concept and scope of the proposed project is consistent with the project description in the 2008 RTP and the 2008 RTIP, and the open to traffic assumptions of the SCAG's regional emissions analysis.

Project-level Conformity—Carbon Monoxide

The proposed project is located in an attainment-maintenance area with respect to the federal CO standard (Table 2-40). Consequently, the effects of localized CO hot-spot emissions were evaluated using the *Transportation Project-level Carbon Monoxide Protocol* (CO Protocol), which was developed for Caltrans by the Institute of Transportation Studies at the University of California, Davis (Garza et al. 1997). The CO Protocol provides a qualitative step-by-step procedure to determine whether project-related CO concentrations have the potential to generate new air quality violations, worsen existing violations, or delay attainment of the NAAQS or CAAQS for CO.

Potential Violations of Carbon Monoxide NAAQS or CAAQS.

The project was evaluated using the CO Protocol described above. The CO Protocol includes two flowcharts that illustrate when a detailed CO analysis needs to be prepared. The first flowchart, Figure 1 of the CO Protocol, is used to ascertain the CO modeling requirements for new projects. The questions (shown in the first flowchart) relevant to the project and the answers to those questions are listed below.

3.1.1: Is the project exempt from all emissions analyses?
Response: No, the proposed project does not qualify for an exemption. As shown in Table 1 of the CO Protocol, the proposed project does not fall into a project category that is exempt from all emissions analysis
(proceed to 3.1.2).

3.1.2: Is the project exempt from regional emissions analyses?
Response: Yes, the proposed project is exempt from a regional emissions analysis. The proposed project is classified as an interchange reconfiguration project. As shown in Table 2 of the CO Protocol, interchange reconfiguration projects are exempt from regional emissions analysis
(proceed to 3.1.9).

3.1.9: The conclusion from this series of questions and answers is that the project needs to be examined for its local air effects (proceed to Section 4, Figure 3 of the CO Protocol).

On the basis of the answers to the first flowchart, a second flowchart, Figure 3 of the CO Protocol, is used to determine the level of local CO effect analysis required for the project. The questions applicable to the project in the second flowchart, and the answers to those questions are listed below.

Level 1: Is the project in a CO nonattainment area?
Response: No, the South Coast Air Basin is classified as an attainment-maintenance area for the federal CO standards (Table 2-37).

Level 1: Was the area redesignated as "attainment" after the 1990 Clean Air Act?
Response: Yes, the South Coast Air Basin was reclassified to attainment-maintenance from serious nonattainment, effective June 11, 2007.

Level 1: Has "continued attainment" been verified with the local air district, if appropriate?
Response: Yes, based on ambient air monitoring data collected by SCAQMD, the South Coast Air Basin has continually met the federal ambient air quality standards for CO since 2003 (California Air Resources Board 2009) (Proceed to Level 7).

Level 7: Does project worsen air quality?
Response: Yes, according to Section 4.7.1 of the CO Protocol, the following criteria provide a basis for determining if a project has the potential to worsen localized air quality:

- *The project significantly increases the percentage of vehicles operating in the cold-start mode. Increasing the number of vehicles in cold-start mode by as little as 2% should be considered potentially significant.*

  Given the nature of the proposed project, which is to reconfigure the existing I-110/C Street interchange, there would be no measurable effect on the percentage of vehicles operating in the cold-start mode.

- *The project significantly increases traffic volumes. Increases in traffic volumes in excess of 5% should be considered potentially significant. Increasing the traffic volume by less than 5% may still be potentially significant if there is also a reduction in average speeds.*

  Tables 2-43 and 2-44, below, summarize the anticipated intersection volumes and the percentages pertaining to growth, respectively, for with- and without-project conditions.

Table 2-43: Intersection Volumes for With- and Without-Project Conditions

Existing Conditions	
Figueroa Street/C Street	965
Figueroa Street/John S. Gibson Blvd.	1,776
Average[b]	1,371
2014 No Build Alternative	
Intersection	**PM Peak-hour Volumes[a]**
Figueroa Street/C Street	2,542
Figueroa Street/John S. Gibson Blvd.	3,015
2014 Build Alternative	
Intersection	**PM Peak-hour Volumes[a]**
Figueroa Street/Harry Bridges Blvd.	3,118
2035 No-Build Alternative	
Intersection	**PM Peak-hour Volumes[a]**
Figueroa Street/C Street	2,852
Figueroa Street/John S. Gibson Blvd.	3,445
2035 Build Alternative	
Intersection	**PM Peak-hour Volumes[a]**
Figueroa Street/Harry Bridges Blvd.	3,579

[a] The most severe traffic conditions were determined to be in the PM peak hour under interim and design-year conditions; therefore, the PM peak hour was chosen for the intersection volume analysis.

Sources: Akkinepally pers. comm.; Iteris 2009a and 2011

Table 2-44: Percentage Increase in Volumes between With- and Without-Project Conditions

Scenario	Percentage Increase[a]
2014 No-Build Alternative to 2014 Build Alternative	3.3%
2035 No-Build Alternative to 2035 Build Alternative	3.7%

[a] The percentage increase was calculated by comparing the intersection under the no-build alternative with the greatest volumes (Figueroa St/ John S. Gibson Blvd intersection) shown in Table 2-43 with the build intersection volumes. This was done because the project would combine two intersections under the no-build alternative into one intersection under the build alternative, and summing the intersection volumes under the no-build alternative would artificially inflate intersection volumes.

Sources: Akkinepally pers. comm.: Iteris 2009a.

As shown in Table 2-44, increases in traffic volumes are anticipated to exceed the CO Protocol's 5% traffic volume increase criteria; therefore, the increase in traffic volumes is considered potentially significant.

- *The project worsens traffic flow. For uninterrupted roadway segments, a reduction in average speeds (within a range of 3 to 50 miles per hour) should be regarded as worsening traffic flow. For intersection segments, a reduction in average speed or an increase in average delay should be considered a worsening of traffic flow.*

  Intersection LOS and average delay data provided by the project traffic engineer, Iteris, indicates average delays will improve with implementation of the proposed project. Table 2-45 summarizes LOS and average delays for with- and without-project conditions.

Table 2-45: LOS and Average Delays for With- and Without-Project Conditions

Existing (2009)				
Intersection	**AM Peak Hour**		**PM Peak Hour**	
	LOS	**Delay[a]**	**LOS**	**Delay[a]**
Figueroa Street and I-110 Ramps/C Street	B	11.1	C	15.8
Figueroa Street/POLA and John S. Gibson Blvd./Harry Bridges Blvd.	A	8.1	A	7.5
2014 No Build				
Intersection	**AM Peak Hour**		**PM Peak Hour**	
	LOS	**Delay[a]**	**LOS**	**Delay[a]**
Figueroa Street and I-110 Ramps/C Street	F	122.5	F	243.6
Figueroa Street/POLA and John S. Gibson Blvd./Harry Bridges Blvd.	B	17.9	B	19.0
2014 Build				
Intersection	**AM Peak Hour**		**PM Peak Hour**	
	LOS	**Delay[a]**	**LOS**	**Delay[a]**
Figueroa Street/John S. Gibson Blvd. and Harry Bridges Blvd./I-110 Ramps	B	18.5	C	20.4
2035 No Build				
Intersection	**AM Peak Hour**		**PM Peak Hour**	
	LOS	Delay[a]	LOS	Delay[a]
Figueroa Street and I-110 Ramps/C Street	F	165.1	F	280.0
Figueroa Street/POLA and John S. Gibson Blvd./Harry Bridges Blvd.	C	21.5	C	22.8
2035 Build				
Intersection	**AM Peak Hour**		**PM Peak Hour**	
	LOS	**Delay[a]**	**LOS**	**Delay[a]**
Figueroa Street/John S. Gibson Blvd. and Harry Bridges Blvd./I-110 Ramps	C	20.5	C	24.4

Note [Table 2-45]:

The intersections analyzed for build and no-build conditions are not the same because the proposed project would replace the two existing intersections (one at C Street/Figueroa Street and the other at John S. Gibson Boulevard/Harry Bridges Boulevard/Figueroa Street) with one new intersection that would align Harry Bridges Boulevard and John S. Gibson Boulevard with the C Street interchange.

[a] delay = average vehicle delay in seconds

[b] Averaging the delay associated with the two no-build intersections to compare the delay with the one build intersection was recommended by the project traffic engineer, Iteris.

Adapted from Iteris 2009c and 2011, and Akkinepally pers. comm.

As shown in Table 2-45, the No-Build Alternative intersections (Figueroa Street and I-110 ramps/C Street and Figueroa Street/POLA and John S. Gibson Boulevard/Harry Bridges Boulevard) are represented as one intersection (Figueroa Street/John S. Gibson Boulevard and Harry Bridges Boulevard/I-110 ramps) under the Build Alternative. A comparison of intersection delay between the No-Build Alternative and Build Alternative indicates that implementation of the proposed project would result in a substantial improvement in delay at the Figueroa Street and I-110 ramps/C Street intersection (from 122.5 seconds [LOS F] to 18.5 seconds [LOS B] [85% improvement in delay] in the AM peak hour and from 243.6 seconds [LOS F] to 20.4 seconds [LOS C] [92% improvement in delay] in the PM peak hour).

At the Figueroa Street/POLA and John S. Gibson Boulevard/Harry Bridges Boulevard intersection, implementation of the proposed project would result in a slight degradation in delay (from 17.9 seconds [LOS B] to 18.5 seconds [LOS B] [3% degradation in delay] in the AM peak hour and from 19.0 seconds [LOS B] to 20.4 seconds [LOS C] [7% degradation in delay] in the PM peak hour). However, the slight degradation in delay at the Figueroa Street/POLA and John S. Gibson Boulevard/Harry Bridges Boulevard intersection is considered minor when compared with the substantial improvement in delay that would result at the Figueroa Street and I-110 ramps/C Street intersection.

Level 7: Is the project suspected of resulting in higher CO concentrations than those existing within the region at the time of attainment demonstration?

Note: The *Final 2007 Air Quality Management Plan* (AQMP) is the most recent AQMP; no additional regional or hot-spot CO modeling was conducted to demonstrate further attainment of the 8-hour average ozone standard. This is because SCAQMD submitted a request to EPA to redesignate the SCAB as an attainment area for the 8-hour federal CO standard (South Coast Air Quality Management District 2007). Therefore, the 2003 AQMP is used as the basis for the analysis that follows. In addition, the 2003 AQMP did not provide model input assumptions. Instead, it referred to the 1992 CO plan in which a general description of input assumptions was provided (South Coast Air Quality Management District 2003).

Response: No. According to Section 4.7.2 of the CO Protocol, project sponsors are encouraged to use the following criteria to determine the potential for the project to result in higher CO concentrations than those existing within the region at the time of attainment demonstration:

a. *The receptors at the location under study are at the same distance or farther from the traveled roadway than the receptors at the location where attainment has been demonstrated.*

   A receptor distance of 3 meters from the traveled roadway was used in the CO attainment demonstration prepared for the 2003 AQMP. With respect to the proposed project, all sensitive receptors are located more than 3 meters from the traveled roadway.

b. *The roadway geometry of the two locations is not significantly different. An example of a significant difference would be a larger number of lanes at the location under study compared to the location where attainment has been demonstrated*.

   In the CO attainment demonstration prepared for the 2003 AQMP, four approach lanes, in all directions, were used to model the intersections at Wilshire/Veteran and La Cienega/Century, while three approach lanes, in all directions, were used to model the intersections at Sunset/Highland and Long Beach/Imperial. With respect to the proposed project, there would be four approach lanes or fewer under the Build Alternative, with the exception of westbound Harry Bridges Boulevard, which has five approach lanes: two left-turn lanes, two through lanes, and one right-turn lane. However, in comparing the total number of intersection approach lanes, the intersections where attainment has been demonstrated had 12 to 16 approach lanes each, compared with 16 approach lanes for the proposed project's Build Alternative.

c. *Expected worse-case meteorology at the location under study is the same or better than the worst-case meteorology at the location where attainment has been demonstrated. Relevant meteorological variables include wind speed, wind direction, temperature, and stability class*.

   In the CO attainment demonstration prepared for the 2003 AQMP, a wind speed of 1 meter per second, stability class D, and worst-case wind angle were used as modeling assumptions. These assumptions are considered worst case; as such, the expected worst-case meteorology at the location under study would be the same or better. In addition, there is no meaningful difference in temperature between the intersections where attainment has been demonstrated and the proposed project's intersection location.

d. *Traffic lane volumes at the location under study are the same or lower than those at the location where attainment has been demonstrated.*

A comparison of the traffic volumes per lane used for modeling in the attainment demonstration and the volumes per lane projected to occur at the study intersection locations is provided in Tables 2-46 and 2-47, respectively.

Table 2-46: Peak-hour Approach Lane Volumes Used in the 2003 AQMP Attainment Demonstration

Location	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)
Wilshire and Veteran (four lanes all directions)	1,238/517	458/829	180/350	140/233
Sunset and Highland (three lanes all directions)	472/588	447/513	768/611	517/746
La Cienega and Century (four lanes all directions)	635/561	473/682	346/507	205/419
Long Beach and Imperial (three lanes all directions)	406/673	587/467	160/315	252/383
Source: South Coast Air Quality Management District 2003.				

Table 2-47: Proposed Project Peak-hour Approach Lane Volumes

Alternative/Roadway Intersection	Eastbound[a] (AM/PM)	Westbound[a] (AM/PM)	Southbound[a] (AM/PM)	Northbound[a] (AM/PM)
Existing Year (2009)				
Figueroa Street/Harry Bridges Blvd.	190/242	29/13	78/54	133/109
Opening Year (2014)				
Figueroa Street/Harry Bridges Blvd.	150/164	252/313	220/190	77/82
Design Year (2035)				
Figueroa Street/Harry Bridges Blvd.	212/174	270/345	266/234	128/114
Lanes: four eastbound, five westbound, three southbound, and four northbound (total lanes = 16)				
Note: AM/PM volumes were calculated by summing all volumes associated with the quadrant (e.g., the sum of all lanes in the eastbound quadrant, including left-turn, through, and right-turn lanes). The total volume was then divided by the total number of lanes for the quadrant and rounded to the nearest whole number. Source: Iteris 2009a; 2011.				

As shown above in Tables 2-46 and 2-47, for both the opening (2014) and design (2035) years, eastbound, westbound, and northbound approach-lane traffic volumes during the AM and PM peak hours under the proposed project would be lower than the volumes at intersections where attainment has been demonstrated. The proposed project's southbound approach-lane volumes in 2014 and 2035 for the AM peak hour would be lower than the volumes at the Sunset/Highland and La Cienega/Century intersections but higher than the volumes at the Wilshire/Veteran and Long Beach/Imperial intersections. During the PM peak hour, southbound lane volumes in 2014 and 2035 would be lower than the volumes at intersections where attainment has been demonstrated.

In summary, the proposed project's approach-lane traffic volumes would be lower than all approach-lane volumes for the intersections where attainment has been demonstrated, except for the AM peak-hour approach-lane volumes at the Wilshire/Veteran and Long Beach/Imperial intersections.

e. *Percentage of vehicles operating in cold-start mode at the location under study is the same or lower than the percentage at the location where attainment has been demonstrated.*

   The proposed project would not increase the percentage of vehicles operating in cold-start mode in the project area because no parking structures would be constructed as part of the proposed project.

f. *Percentage of heavy-duty gas trucks at the location under study is the same or lower than the percentage at the location where attainment has been demonstrated*.

   Because the intersections where attainment has been demonstrated (Table 2-45) are located along urban arterial roadways (that contain a similar mix of urban land uses) within the SCAB, and the intersection in the project area (Table 2-46) is a main access point to the port, the percentage of heavy-duty gas trucks is anticipated to be higher than the percentage at the location where attainment has been demonstrated.

   Although the percentage of heavy-duty gas trucks is anticipated to be higher, as shown in Tables 2-48 and 2-49, the percentage of heavy-duty trucks on the cross-streets and the mainline is not anticipated to change with implementation of the proposed project.

Table 2-48: Cross-street Truck Percentages

Roadway Segment	2009[a]	2014[a]	2035[a]
C Street East of Figueroa Street	n/a	0%	0%
Figueroa Street North of I-110 Ramps	n/a	13%	12%
John S. Gibson Blvd. South of I-110 Ramps	n/a	28%	29%
Harry Bridges Blvd. East of Figueroa Street/John S. Gibson Blvd.	n/a	33%	31%

[a] The truck percentages for the build and no-build conditions were reported to be the same.

Source: Iteris 2009b.

Table 2-49: Mainline Truck Percentages

Segment	2009[a]	2014[a]	2035[a]
I-110 South of C Street Off-Ramp	11%	17%	17%
I-110 Off-ramp to C Street	4%	13%	10%
I-110 between C Street Off- and On-Ramps	11%	17%	18%
I-110 On-ramp from C Street	31%	34%	35%
I-110 between C Street On-ramp and Anaheim Off-Ramp	14%	20%	19%

Note:

Truck percentages for southbound traffic were assumed to be the same as truck percentages for northbound traffic.

[a] Truck percentages are the same for the build and no-build conditions.

Source: Iteris 2009b.

g. *For projects involving intersections, average delay and queue length for each approach is the same or smaller for the intersection under study compared to those found in the intersection where attainment has been demonstrated.*

As shown above in Tables 2-46 and 2-47, opening-year (2014) and design-year (2035) approach-lane traffic volumes during AM and PM peak hours for eastbound, westbound, and northbound traffic under the proposed project would be lower than the volumes at all intersection locations where attainment has been demonstrated. The proposed project's southbound lane volumes for the AM peak hour would be lower than the volumes at the Sunset/Highland and La Cienega/Century intersections but higher than the volumes at the Wilshire/Veteran and Long Beach/Imperial intersections. During the PM peak hour, southbound lane volumes for the proposed project would be lower than the volumes at all intersections where attainment has been demonstrated..

Therefore, it is assumed that average delay and queue length for each approach would be the same or smaller at the proposed project's intersection compared with the intersections where attainment has been demonstrated.

h. *Background concentration at the location under study is the same or lower than the background concentration at the location where attainment has been demonstrated*.

As shown earlier in Table 2-41, background CO concentrations in the project area have ranged from 2.49 ppm to 3.36 ppm during the past few years for the 8-hour averaging period. This compares with the 8-hour average maximum background concentrations, which range from 14.5 ppm in 1997 to 7.7 ppm in 2005 at the Long Beach/Imperial intersection, 2.3 ppm in 1997 to 1.3 ppm in 2005 at the Wilshire/Veteran intersection, 3.3 ppm in 1997 to 1.8 ppm in 2005 at the Sunset/Highland intersection, and 8.0 ppm in 1997 to 3.8 ppm in 2005 in the 2003 AQMP attainment demonstration.

On the basis of the screening criteria from Section 4.7.2 of the CO Protocol, under the proposed project, the intersection of Figueroa Street/John S. Gibson Boulevard and Harry Bridges Boulevard/I-110 ramps is not anticipated to cause project area CO concentrations to exceed levels that existed in the region at the time of attainment demonstration. Also, the intersections in the project area would operate at LOS B under existing with-project conditions and LOS C under interim (2014) and design-year (2035) with-project conditions. Therefore, no violations of the CAAQS or the NAAQS pertaining to CO are anticipated to occur with implementation of the proposed project. There would be no adverse effects (NEPA) or significant impacts (CEQA).

Project-level Conformity—Particulate Matter

The proposed project is located in a serious nonattainment area for the federal PM10 standard and a nonattainment area for the federal PM2.5 standard (Table 2-40). The effects of localized particulate matter were evaluated using *Transportation Conformity Guidance for Qualitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas*, a guidance manual from EPA and FHWA (Federal Highway Administration and U.S. Environmental Protection Agency 2011). This guidance provides a qualitative screening procedure to identify projects of air quality concern (POAQC). Please refer to the AQSR (ICF International 2011) for an expanded discussion of this process.

Potential Violations of PM2.5 and PM10 CAAQS or NAAQS. EPA's transportation conformity rules stipulate that transportation projects that are considered a POAQC or any other project that is identified by the PM2.5 SIP as a localized air quality concern must undergo hot-spot analysis in PM2.5 nonattainment and maintenance areas. For areas without approved conformity SIPs, a PM10 hot-spot analysis is to be performed only for a POAQC. For areas with an approved conformity SIP, the 2006 Particulate Matter Conformity Final Rule does not apply, and an analysis must be performed that meets the requirements in the approved PM10 SIP until the SIP is updated and subsequently approved by EPA.

The CFR indicates that a conformity SIP for particulate matter has not been approved for the Basin by EPA (40 CFR 52.223). Consequently, if the project is a POAQC, it must undergo PM10 (and PM2.5) hot-spot conformity determinations (O'Connor pers. comm.). Because the proposed project is located in a serious nonattainment area with respect to the federal PM10 standard and a nonattainment area with respect to the federal PM2.5 standard (see Table 2-40) and violations of the NAAQS currently exist, a hot-spot analysis must be performed for PM10 and PM2.5.

As shown in Table 2-50, ADT on I-110 is anticipated to exceed the FHWA and EPA POAQC ADT criterion of 10,000 diesel trucks (diesel truck traffic of 8 percent or more for roadways with ADT of 125,000 or more). However, Table 2-47 also indicates that implementation of the proposed project would not affect diesel truck volumes or percentages under no-build or build conditions. Consequently, the Build Alternative is not considered a POAQC for PM10 and PM2.5 because it would not have an effect on roadway diesel truck volumes or percentages (i.e., the difference in truck percentages would be below 5 percent between the No-Build Alternative and the Build Alternative).

Table 2-50: Mainline ADT and Truck ADT on I-110

Segment	2009[a]	2009 Trucks[b]	2014[a]	2014 Trucks[b]	2035[a]	2035 Trucks[b]
I-110 South of C Street Off-Ramp	79,066	8,697	90,775	15,432	113,975	19,376
I-110 Off-Ramp to C Street	6,086	243	8,240	1,071	9,446	945
I-110 between C Street Off- and On-Ramps	76,197	8,382	86,178	14,650	109,139	19,645
I-110 On-Ramp from C Street	8,094	2,509	8,811	2,996	8,791	3,077
I-110 between C Street On-Ramp and Anaheim Off-Ramp	82,609	11,565	92,967	18,593	114,552	21,765

Notes:
[a] Mainline annual average daily traffic (AADT) was calculated by summing southbound and northbound AADT for each segment. According to the project traffic engineers, AADT volumes are the same for the build and no-build conditions.
[b] Truck ADT was obtained by multiplying mainline ADT by the truck percentages in Table 2-45.

Adapted from Iteris 2009b; California Department of Transportation 2009.

Because the proposed project is not considered a POAQC, the Clean Air Act and 40 CFR 93.116 requirements were met without a hot-spot analysis. The Build Alternative has been found to not be of air quality concern under 40 CFR 93.123(b)(1); therefore, implementation of the proposed project is not anticipated to contribute to additional exceedances of the NAAQS or the CAAQS. In addition, Table 2-51, which provides a summary of daily operational emissions associated with the proposed project, indicates there would be a decrease in PM10 and PM2.5 emissions with implementation of the proposed project compared with the no-build condition. Under the 2014 build scenario, PM10 emissions would decrease by 1.336 pounds per day, and PM2.5 emissions would decrease by 0.666 pound per day compared with the no-build condition. Under the 2035 build scenario, PM10 emissions would decrease by 1.063 pounds per day, and PM2.5 emissions would decrease by 0.377 pound per day compared with the no-build condition. In addition, the proposed project has also undergone the required interagency consultation (IAC) process (40 CFR 93.105). The IAC confirmed on January 26, 2010, that the proposed project is not a POAQC. Documentation from the IAC meeting is included in Appendix H2, IAC Documentation. Therefore, there would be no adverse effect (NEPA) and no significant impact (CEQA).

Table 2-51: Summary of Daily Operational Emissions

Scenario	Daily VMT	ROG[a]	NO_X	CO	PM10[b]	PM2.5[b]
Existing	21,217	11.625	67.395	165.837	8.351	1.947
2014 No Build	27,230	15.681	114.268	169.257	10.808	2.582
2014 Build	25,152	9.127	56.551	127.619	42.660	1.916
2035 No Build	34,756	12.134	107.207	110.645	12.296	1.909
2035 Build	32,528	4.871	26.467	64.235	11.233	1.532
Alternative Differences						
Scenario	**Daily VMT**	**ROG[a]**	**NO_X**	**CO**	**PM10**	**PM2.5**
2014 Build – 2014 No Build	-2,078	-6.555	-57.717	-41.638	-1.336	-0.666
2035 Build – 2035 No Build	-2,228	-7.263	-80.740	-46.409	-1.063	-0.377

[a] CT-EMFAC does not calculate ROG, only TOG. Therefore, emissions of ROG were calculated from CT-EMFAC-estimated TOG emissions by multiplying the TOG emissions by the ratio of ROG to TOG obtained from EMFAC 2007.

[b] Calculations of entrained dust are included and were performed according to the emissions factor equation found in EPA's Compilation of Air Pollutant Emission Factors, AP-42 Section 13.2.1:

Road Emissions (pounds/day) = Daily VMT * Emission Factor (E)

EPA Emission Factor Formula: E = [k(sL/2)^0.91 x (W)^1.02] x (1-P/4N), where E = particulate emissions factor (having units matching the units of k), k = particle size multiplier for particle size range and units of interest, sL = roadway silt loading (g/m^2), W = average weight of vehicles traveling the road (tons), P = number of wet days with at least 0.254mm (0.01 inch) of precipitation, and N = number of days in the averaging period.

k for PM10 = 0.0022 pound/VMT, k for PM2.5 = 0.00054 pound/VM, sL for Los Angeles County = 0.037 g/m^2, W for Los Angeles County = 2.7 tons, C = 40 days/year, N = 365 days

According to Table 3 of CARB's methodology, sL for major roads in Los Angeles County = 0.037 g/m^2, sL for freeways in Los Angeles County = 0.020 g/m^2, and W for Los Angeles County = 2.7 tons. As indicated in Table 3-6, the VMT provided by the traffic engineers includes both freeway links and major links, according to CARB standards. Because the VMT by 5 mph speed bin breakdown provided by the traffic engineers does not indicate which links the VMT is associated with, the sL for major roads was used as a worst-case-scenario.

According to EPA's AP-42 Section 13.2.1 document, there may be situations where low silt loading and/or low average vehicle weight will yield calculated negative emissions from EPA's Emission Factor Formula equation, above. If this occurs, the emissions calculated from the equation should be set to zero. Calculated PM2.5 emissions were negative; therefore, PM2.5 emissions were set to zero.

Sources: California Air Resources Board 1997; U.S. Environmental Protection Agency 2011; Iteris 2011.

Naturally Occurring Asbestos

NOA is a fibrous material found in certain types of rock formations. It is the result of natural geologic processes and commonly found near earthquake faults in California. Some rock types known to produce asbestos fibers are varieties of chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite.

Asbestos is harmless when it is left undisturbed under the soil, but if it becomes airborne, it can cause serious health problems. Human disturbance, or natural weathering, can break down asbestos into microscopic fibers that are easily inhaled. Inhalation of asbestos fibers can cause lung cancer, mesothelioma (a rare form of cancer found in the lining of internal organs), and asbestosis (a progressive, non-cancer disease of the lungs involving a buildup of scar tissue, which inhibits breathing) (U.S. Environmental Protection Agency 2008a, 2008b).

Both EPA and CARB have issued guidance for reducing exposure to NOA. EPA's suggested measures include leaving NOA material undisturbed, covering or capping NOA material, limiting dust-generating activities, and excavating and disposing of NOA material (U.S. Environmental Protection Agency 2008c). CARB has adopted Airborne Toxic Control Measures (ATCMs), which are required for road construction and maintenance projects unless a project is found to be exempt. These ATCMs include stabilizing unpaved surfaces subject to vehicle traffic, reducing vehicle speeds, wetting or chemically stabilizing storage piles, and eliminating track-out material from equipment (California Air Resources Board 2008).

Potential Release of Asbestos during Construction and Maintenance Activities. While NOA is common in certain counties of California, it is not likely to be found in Los Angeles County (California Department of Conservation 2000). Therefore, there would be no adverse effect (NEPA) or significant impact (CEQA).

Mobile-Source Air Toxics

MSAT emissions were evaluated using a combination of FHWA's *Interim Guidance Update on Mobile-Source Air Toxic Analysis in NEPA Documents* (Federal Highway Administration 2009a) and preliminary California-specific guidance from Caltrans. The California-specific guidance is identical to FHWA's guidance except for the California-specific criteria for performing qualitative and quantitative analysis (Brady pers. comm.). The California-specific criteria are found in CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Brady pers. comm.; California Air Resources Board 2005). FHWA's interim guidance uses a tiered approach to determine how MSAT issues should be addressed in NEPA documents for highway projects (Federal Highway Administration 2009a). Please refer to the AQSR (ICF International 2011) for additional detail.

Potential Generation of Significant Levels of MSAT Emissions. With implementation of the proposed project, the amount of MSATs emitted would be proportional to VMT, assuming that other variables, such as fleet mix, are the same for each alternative. As indicated in Tables 2-48 and 2-49, truck percentages are not anticipated to increase with implementation of the proposed project; therefore, a qualitative analysis of MSATs based on VMT is provided. Estimated VMT for the Build Alternative is slightly lower than VMT under the No-Build Alternative (see Table 2-51). Because estimated VMT under the Build Alternative in the open-to-traffic year (2014) and future year (2035) would vary by less than 10 percent, no appreciable difference in overall MSAT emissions is expected with implementation of the Build Alternative. In addition, as shown in Table 2-45, above, intersection delay would be drastically reduced with implementation of the Build Alternative, which would likely reduce MSAT emissions as well.

By the design year, emissions will likely be lower than present levels as a result of EPA's national control programs, which are projected to reduce annual MSAT emissions by 72 percent between 1999 and 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that future MSAT emissions in the study area are likely to be lower at virtually all locations.

Under the Build Alternative, there may be localized areas where VMT would increase and other areas where VMT would decrease. Therefore, it is possible that localized increases and decreases in MSAT emissions may occur. The localized increases in MSAT emissions would likely be most pronounced along the Harry Bridges Boulevard section of the new interchange. However, even if these increases do occur, they too will be substantially reduced in the future with implementation of EPA's vehicle and fuel regulations.

In sum, under the Build Alternative in the design year it is expected that there would be reduced MSAT emissions in the immediate project area relative to the No-Build Alternative because of reduced VMT from more direct routing and EPA's MSAT reduction programs. Therefore, there would be no adverse effects (NEPA) or significant impacts (CEQA).

Compliance with 40 CFR 1502.22 (b). To comply with Council on Environmental Quality regulations (40 CFR 1502.22[b]) pertaining to incomplete or unavailable information, a discussion regarding air toxics analysis and a summary of current studies regarding the health effects of MSATs is provided below. The text is taken from FHWA's *Interim Guidance Update on Mobile-Source Air Toxic Analysis in NEPA Documents* (Federal Highway Administration 2009a).

In FHWA's view, if information is incomplete or unavailable to predict project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives, the outcome of an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. It is the lead authority for administering the Clean Air Act and its amendments and has specific statutory obligations with respect to hazardous air pollutants and MSATs. EPA is continuously assessing human health effects, exposures, and the risks posed by air pollutants. It maintains the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA 2010b). Each report contains assessments regarding non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures.

Another organization that is also actively researching and analyzing the human health effects of MSATs is the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's *Interim Guidance Update on Mobile-Source Air Toxic Analysis in NEPA Documents*. Among the adverse health effects linked to MSAT compounds at high exposure levels are cancer in humans in occupational settings, cancer in animals, and irritation to the respiratory tract, including an exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI 2007) or in the future as vehicle emissions substantially decrease (HEI 2009).

The methodologies for forecasting health impacts include emissions modeling, dispersion modeling, and exposure modeling. After modeling, the final determination of the health impacts is made, with each step in the process building on the model predictions obtained in the previous step. However, all methodologies are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 -year) assessments because unsupportable assumptions have to be made regarding changes in travel patterns and vehicle technology over that time frame because such information is unavailable. The assumptions affect emissions rates, and the results produced by EPA’s MOBILE6.2 and DraftMOVES2009 models and California EPA’s EMFAC2007 model are highly inconsistent when forecasting MSAT emissions. Indications from the development of the MOVES model are that MOBILE6.2 significantly underestimates diesel particulate matter emissions and significantly overestimates benzene emissions.

Regarding air dispersion modeling, EPA’s guideline CAL3QHC model was evaluated in a National Cooperative Highway Research Program study (EPA 2010c) that documented poor model performance at 10 sites across the country (three sites where intensive monitoring occurred plus an additional seven with less intensive monitoring). The study indicates that the CAL3QHC model overestimates concentrations near highly congested intersections and underestimates concentrations near intersections that are not congested. The consequence of this is a tendency to overstate the air quality benefits of mitigating congestion at intersections.

Forecasting individual exposure over an entire lifetime is difficult, especially given that some information needed for estimating a 70-year lifetime exposure is unavailable. However, such poor model performance is less difficult to manage when demonstrating compliance with the NAAQS for relatively short time frames. Finally, it is particularly difficult to forecast MSAT exposure reliably near roadways and determine the portion of time that people are actually exposed at a specific location.

Considerable uncertainties are associated with the existing estimates of toxicity for the various MSATs because of factors such as low-dose extrapolation and the translation of occupational exposure data to the general population, a concern expressed by HEI (HEI 2007). As a result, there is no national consensus regarding the air dose-response values assumed to protect the public health and welfare from MSAT compounds and, in particular, diesel particulate matter. EPA (EPA 2010d) and HEI (HEI 2007) have not established a basis for quantitative risk assessment of diesel particulate matter in ambient settings.

There is also the lack of a national consensus regarding an acceptable level of risk. The current context is the process used by EPA, as provided by the Clean Air Act, to determine whether more stringent controls are required to provide an ample margin of safety to protect public health or prevent an adverse environmental effect from industrial sources, which are subject to the maximum achievable control technology standards, such as the standards pertaining to benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine a “safe” or “acceptable” level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with a level of risk of less than 1 in a million. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics will be less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA's approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish if even the largest of highway projects would result in levels of risk that would be unsafe or unacceptable.

Because of the limitations associated with the methodologies for forecasting health impacts, any predicted differences between alternatives are likely to be less significant than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reduced traffic congestion, fewer accidents and fatalities, and improved access for emergency response personnel, areas that are better suited for quantitative analysis.

Operational Emissions

Long-term air quality effects are associated with motor vehicles operating on the roadway network, predominantly those operating in the project vicinity. Emissions of TOG, NO_X, CO, PM10, PM2.5, and CO_2 for existing (2008), open-to-traffic (2014), and design-year (2035) conditions along project roadway segments were evaluated through modeling using Caltrans' CT-EMFAC model and traffic data provided by the project traffic engineer, Iteris (Iteris 2011). Idling emissions from medium- and heavy-duty trucks were quantified using the EMFAC 2007 emissions model and estimates of vehicle delay at study area intersections (Iteris 2011). In addition, regional emissions reductions resulting from project implementation, based on the Synchro modeling analyses prepared by the port and contained in the port's funding applications, are also presented, but not included in the emissions calculations. However, POLA's required CEQA emissions analysis included in Appendix H3 does include the emissions reductions associated with the POLA's Synchro modeling. Entrained paved road dust attributable to the project was calculated using EPA's *Compilation of Air Pollutant Emission Factors,* AP-42, Section 13.2.1 (U.S. Environmental Protection Agency 2011), and CARB's methodology to calculate county-specific emissions inventories, *Entrained Paved Road Dust, Paved Road Travel*, Section 7.9 (California Air Resources Board 1997). The traffic conditions modeled in the analysis included vehicle activity for affected roadways in the immediate project region. Please refer to the AQSR (ICF International 2011) for additional information.

Potential Generation of Adverse Operational Emissions of Ozone Precursors, Carbon Monoxide, and Particulate Matter. Table 2-51, above, summarizes the modeled daily emissions. Based on the results of the analysis, implementation of the proposed project is anticipated to result in a net reduction in all criteria pollutants. These reductions would be attributable to reduced vehicle delay and congestion as well as overall reductions in regional VMT. It should also be noted that vehicular emission rates, in general, are anticipated to lessen in future years because of continuing improvements in engine technology and the retirement of older, higher emitting vehicles. No adverse effects (NEPA) or significant impacts (CEQA) would occur.

Avoidance, Minimization, and/or Mitigation Measures

The construction contractor will be required to comply with and adhere to all applicable rules and regulations, such as SCAQMD Rule 401 for visible emissions control, Rule 402 for nuisance, Rule 403 for fugitive dust control, Rule 1113 for control of VOC emissions from asphalt operations, Rule 1403 for limiting asbestos emissions, and other pertinent requirements concerning the operation of construction equipment and dust control. Implementation of these control measures would reduce the fugitive dust emissions by approximately 50 percent. In addition, the construction contractor will also be required to follow the Sustainable Construction Guidelines for reducing air emissions from all LAHD-sponsored construction projects, as presented in mitigation measures LAHD AQ-1 through LAHD AQ-8 of Appendix H.3 of this document.

AQ-1 As required by the LAHD, the construction contractor shall adhere to the current LAHD Sustainable Construction Guidelines for Reducing Air Emissions during project construction phase. The LAHD shall determine the applicable BMP‘s once the contractor identifies and secures a final equipment list and project scope.

Implementation of all applicable rules and regulations and mitigation measure AQ-1 would ensure that the project does not result in adverse effects on air quality during construction. For project operations, the design concept and scope of the proposed project is consistent with the project description in the RTIP document and the assumptions in SCAG‘s regional analysis. A project-level conformity determination was also conducted. Implementation of the proposed project would not adversely affect air quality of the region. No mitigation is required.

Climate Change

Climate change is analyzed in Section 2.5, Climate Change (CEQA). Neither EPA nor FHWA has promulgated explicit guidance or methodology for conducting project-level greenhouse gas (GHG) analysis. As stated on FHWA’s climate change web site (http://www.fhwa.dot.gov/hep/climate/index.htm), climate change considerations should be integrated throughout the transportation decision-making process, from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision making and improve efficiency at the program level and inform the analysis and stewardship needs of project-level decision making. Climate change considerations can be easily integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

Because additional requirements pertaining to climate change have been set forth in California legislation and executive orders, the issue is addressed in this environmental document and may be used to inform the NEPA decision. The four strategies set forth by FHWA to lessen climate change impacts correlate with efforts that the state has undertaken and is undertaking to deal with transportation and climate change; the strategies are related to improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in the growth of VMT.

2.2.7 Noise

Regulatory Setting

NEPA and CEQA provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with FHWA (and Caltrans, as assigned) involvement, the federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 A-weighted decibels [dBA]) is lower than the NAC for commercial areas (72 dBA). Table 2-52 lists the noise abatement criteria for use in the NEPA-23 CFR 772 analysis.

Table 2-52: Noise Abatement Criteria

Activity Category	NAC, dBA L_{eq}(h)	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above
D	–	Undeveloped lands.
E	52 Interior	Residence, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Note:
L_{eq}(h) = equivalent noise level.
Source: FHWA, Procedures for Abatement of Highway Traffic and Construction Noise, 2006.

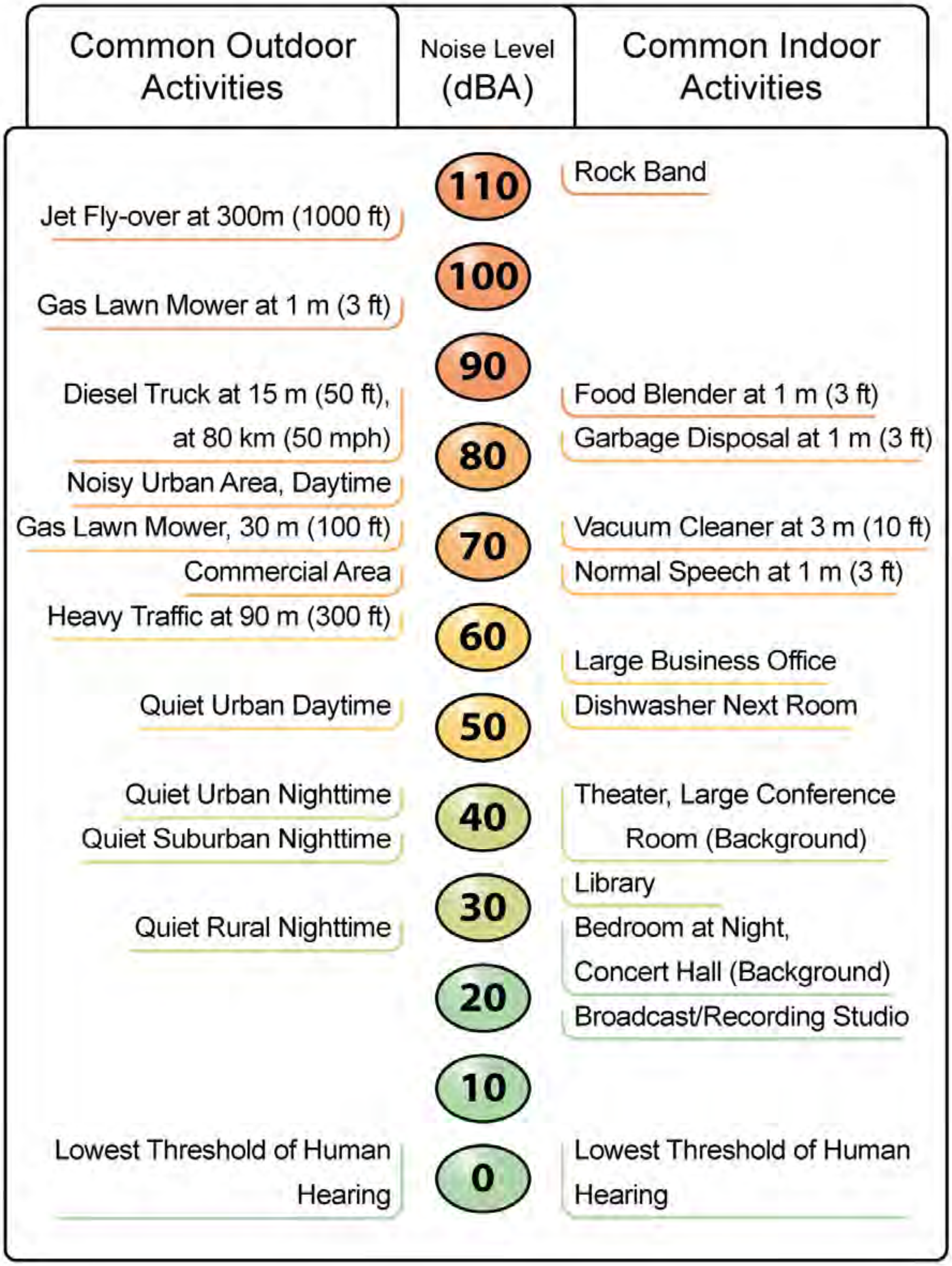
Figure 2-11 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise-levels discussed in this section with common activities.

In accordance with Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects* (2006a), a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

Caltrans' Traffic Noise Analysis Protocol sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5 dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources and safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies input, newly constructed development versus development pre-dating 1978 and the cost per benefited residence.

Figure 2-11: Noise Levels of Common Activities



Source: California Department of Transportation. State Environmental Reference.
Available: <http://www.dot.ca.gov/ser/>. Accessed June 22, 2007.

Affected Environment

Unless otherwise noted, the information from this section was synthesized from the *Noise Impact Analysis* prepared for the proposed project (ICF International 2010d).

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally defined as unwanted or annoying sound that is typically associated with human activity and that interferes with normal activities. Sound levels are measured and expressed in decibels (dB). The human ear does not respond uniformly to sounds at all frequencies, being less sensitive to low and high frequencies than to medium frequencies, which correspond with human speech. In response, the A-weighted noise level (or scale) has been developed. This A-weighted sound level is called the "noise level," which is referenced in units of dBA. The human ear does not typically notice changes in noise levels of less than three dBA. The equivalent noise level (L_{eq}) is the average A-weighted sound level measured over a given time interval. L_{eq} can be measured over any time period, but is typically measured for 1-hour periods and is expressed as L_{eq}(h).

The land uses in the project area consist primarily of port-related industrial uses. Noise-sensitive uses in the area are located north of C Street and east of Figueroa Street and consist of single-family residences, multi-family residences, a child care facility and a church. I-110 is generally elevated relative to the nearby land uses.

Noise Measurement Sites

A field noise study was conducted in accordance with the recommended procedures in Caltrans' *Technical Noise Supplement* (TeNS). The following is a summary of the procedures used to collect short-term and long term sound level data.

Short-Term Measurements

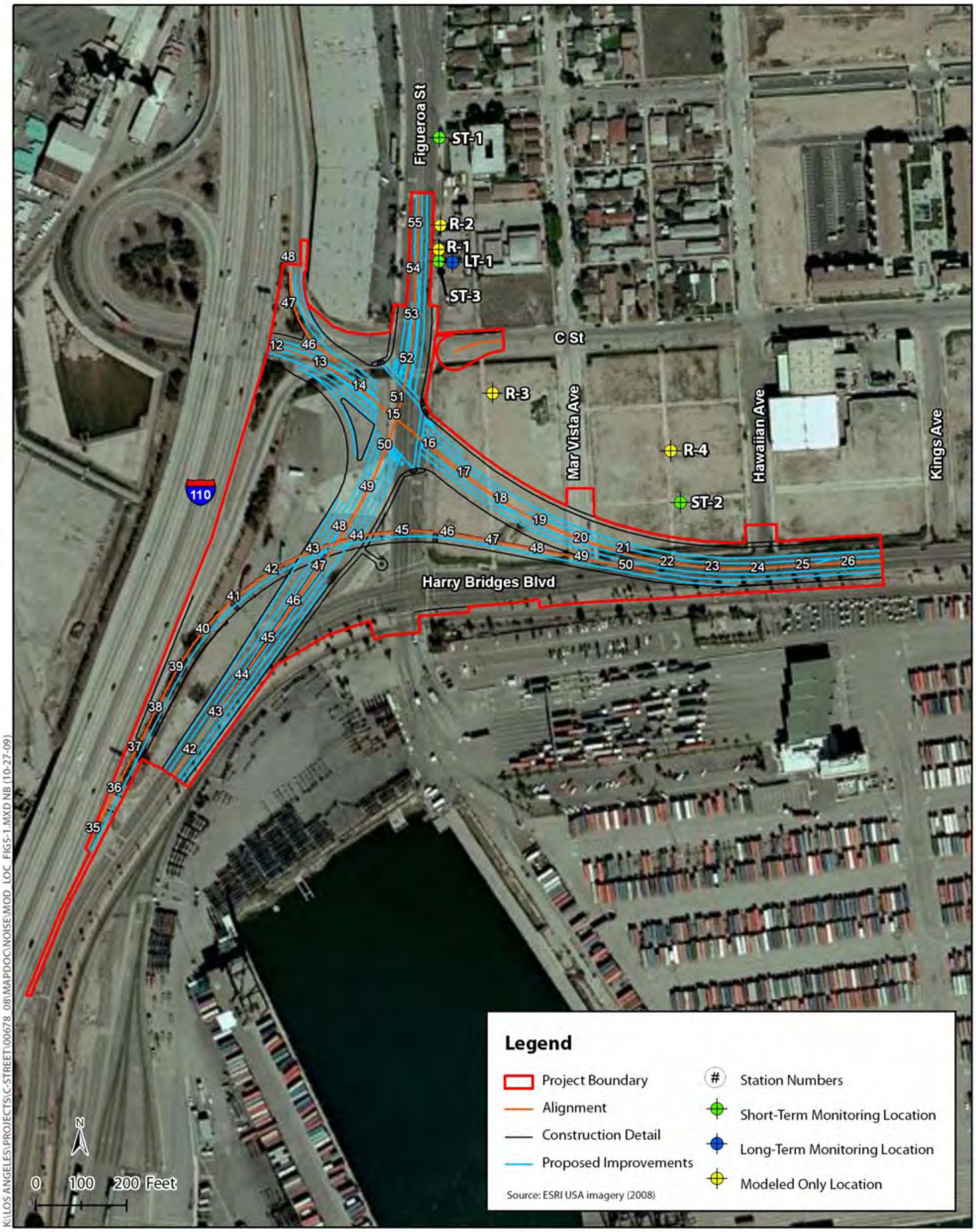
Short-term monitoring was conducted at three locations between May 13, 2009, and May 14, 2009, using a Larson Davis Type 1 (Precision grade) sound level meter (serial number 0432). A minimum of two consecutive but separate measurements, each 10 minutes in duration, were taken at each site. Short-term monitoring was conducted at Activity Category B land uses. Table 2-53 provides a summary of short-term receptor sites. The short-term measurement locations are identified in Figure 2-12.

Table 2-53: Short-Term Receptor Sites

Receptor	Address	Land Uses/Activity Category
ST-1a	328 Figueroa Avenue	Recreation Day Care Center/Activity Category B
ST-1b		
ST-2a	Planned Park Site	Recreation/Activity Category B
ST-2b		
ST-3	316 Figueroa Street	Residential/Activity Category B

Source: ICF International 2010d.

Figure 2-12: Noise Measurement Sites



Long -Term Measurements

Long-term monitoring was conducted at one location (LT-1) (see Figure 2-10) using a Rion Model NL-21 sound level meter. The purpose of this measurement was to identify the traffic noise patterns throughout the typical day/night cycle. The long-term sound level data was collected over time periods of 24 hours or more, beginning May 13, 2009, and ending May 14, 2009.

Long-term monitoring site LT-1 was located at the single-family residence at 316 Figueroa Street on the east side of Figueroa Street. The loudest-hour noise level measured was 66 dBA L_{eq}(h) during the 4 p.m. and 9 a.m. hours.

A formal calibration procedure was not used for this project, because the roadway geometry would be dramatically altered with construction of the project. This is consistent with Caltrans guidance (California Department of Transportation 1998). Although no calibration procedure was used, the noise levels as measured at short-term receptor locations were compared with the modeled, existing peak-hour noise levels, to assure that the modeled results were reasonable. Measured noise levels were 1.2 to 1.6 dBA higher than the modeled peak-noise-hour levels (see Table 2-54).

Table 2-54: Comparison of Measured and Modeled Sound Levels (dB) in the TNM Model

Receiver #	Measured L_{eq}	Modeled L_{eq}	Delta (Measured – Modeled)
ST-3	65.6	64.2	1.4
R-2	n/a	64.4	n/a
R-1	n/a	63.6	n/a
ST-1	65.3	63.7	1.6
ST-2	n/a	61.7	n/a
R-3	65.4	64.2	1.2

Source: ICF International 2010d.

Existing Noise Environment

Existing modeled peak-noise-hour traffic noise levels ranged from 61 dBA L_{eq}(h) at receiver R-4 to 64 dBA L_{eq}(h) at receivers ST-1, ST-2, ST-3, R-1 and R-2. FHWA/Caltrans NAC are not exceeded at the modeled receptors under the existing modeled conditions.

Environmental Consequences

Construction Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, noise levels would not be affected.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction noise is regulated by Caltrans Standard Specifications, Section 7-1.01I, "Sound Control Requirements," which states that noise levels generated during construction will comply with applicable local, state, and federal regulations, and that all equipment will be fitted with adequate mufflers according to the manufacturers' specifications.

Table 2-55 summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels ranging from 70 to 90 dB at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance.

Table 2-55: Construction Equipment Noise

Equipment	Maximum Noise Level (dBA at 50 feet)
Scrapers	89
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: Federal Transit Administration 1995.

No adverse noise impacts from construction under NEPA are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications, Section 7-1.01I, and applicable local noise standards. Construction noise would be short-term, intermittent, and overshadowed by local traffic noise and would be less-than-significant under CEQA. However, mitigation measures would be implemented to ensure that there are no substantial adverse effects under NEPA or significant impacts under CEQA.

Operational Impacts

The project site was divided into two evaluation areas for noise analysis. Table 2-56 summarizes the modeled traffic noise levels for existing (2008) and design-year (2035) conditions under build and no-build scenarios. Figure 2-13 shows the evaluation areas.

Alternative 1: No-Build Alternative

Under the future No-Build Alternative, peak-noise-hour traffic noise levels are predicted to range from approximately 63 dBA L_{eq}(h) (at receptor R-3) to 67 dBA L_{eq}(h) (at receptors ST-3 and R-2) in the design year. Traffic noise levels would increase two to three dB (rounded to whole decibels) compared with existing conditions; thus, there would be no substantial (12 dBA or

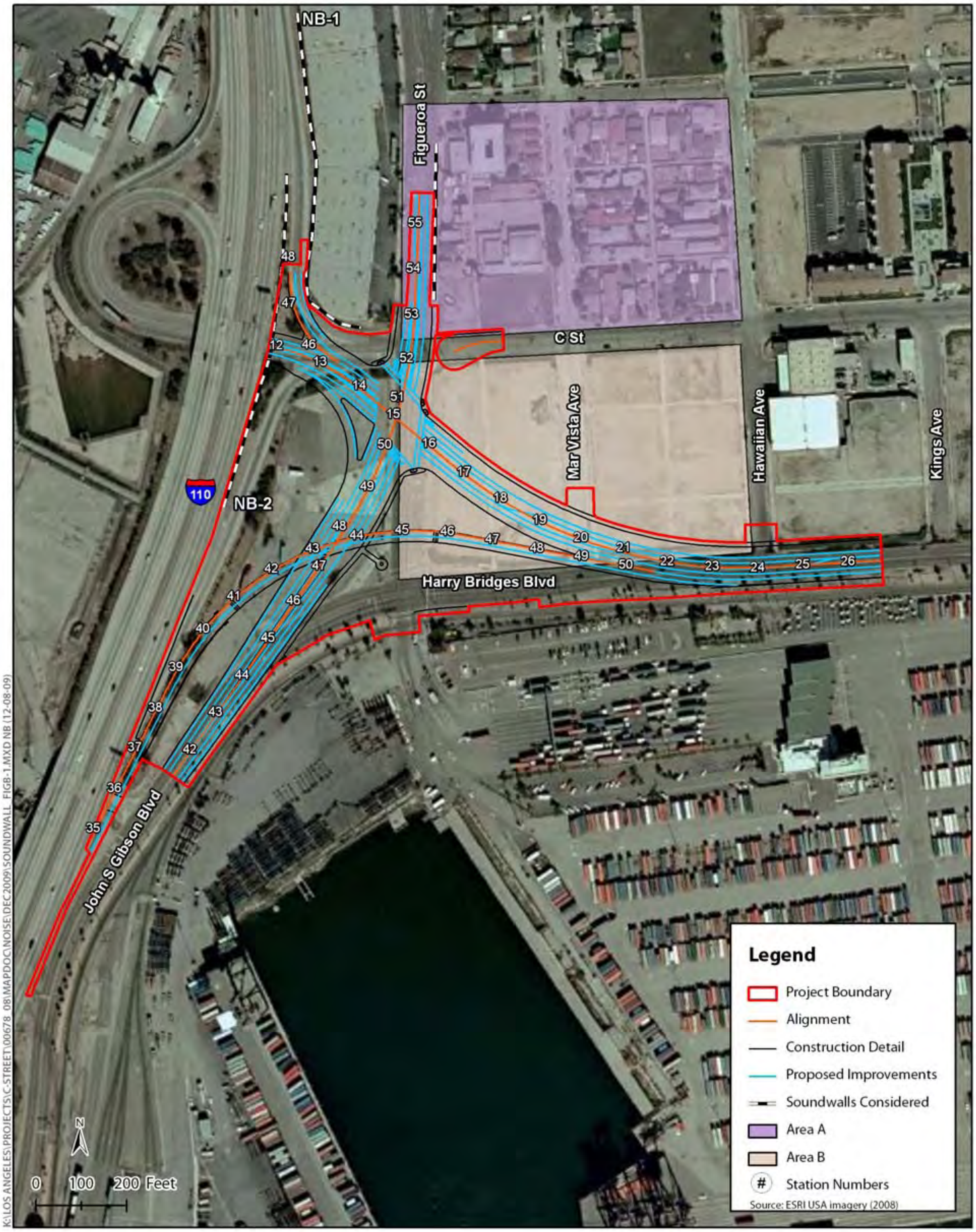
Table 2-56: Traffic Noise Levels for Existing without-Project, Existing with-Project, Future without-Project, and Future with-Project Scenarios

							Future Worst-Hour Traffic Noise Levels (Leq(h), dBA)				
Receiver I.D.	**Area**	**Land Use/Activity Category (NAC)**	**Number of Dwelling Units**	**Modeled Existing-Year without-Project Traffic Noise Level (Leq(h), dBA)**	**Modeled Existing-Year with-Project Traffic Noise Level (Leq(h), dBA)**	**Modeled Existing-Year with-Project minus Existing-Year without-Project Noise Level (dBA)**	**Design-Year Traffic Noise Level without Project (Leq(h), dBA)**	**Design-Year Traffic Noise Level with Project (Leq(h), dBA)**	**Design-Year Traffic Noise Level with Project Minus Design-Year Traffic Noise Level without Project Conditions (dBA)**	**Design-Year Traffic Noise Level with Project Minus Existing Conditions (dBA)**	**Impact Type**
ST-3	A: Adjacent to Figueroa St. (D St. to C St.)	Recreation/B (67)	1	64	65	1	67	68	1	4	A/E
R-2		Residential/B (67)	1	64	65	1	67	68	1	4	A/E
R-1		Residential/B (67)	1	64	64	0	66	67	1	3	A/E
ST-1		Residential/B (67)	1	64	64	0	66	68	2	4	A/E
R-3	B: Adjacent to Harry Bridges Blvd. (Hawaiian Ave. to Figueroa St.)	Recreation/B (67)	4	62	59	-3	65	62	-3	0	None
ST-2		Vacant	n/a	64	n/a	n/a	66	n/a	n/a	n/a	n/a
R-4		Recreation/B (67)	4	61	59	-2	63	62	-1	1	None

Note: A/E= future noise conditions approach or exceed the NAC.

n/a: this location would become part of the landscaped buffer/berm area.

Figure 2-13: Noise Evaluation Areas



greater) noise increases. Under this alternative, traffic noise levels would not exceed the Activity Category B NAC at any of the seven modeled representative receptor sites. Thus, impacts would not be adverse under NEPA or significant under CEQA.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Under the 2008 scenario, as a result of the proposed project, a 1-decibel increase in noise is predicted to occur at two of the seven modeled receivers (ST-3 and R-2). The other modeled receivers would either experience no change or up to a 3-decibel decrease in the noise level. Modeled existing with-project noise levels would not approach or exceed the NAC of 67 dBA L_{eq}(h), nor would they cause a significant increase under CEQA.

The traffic noise modeling results indicate that traffic noise levels at the residences in Area A would range from 67 to 68 dBA L_{eq}(h) in the design year (2035) with the project. The results also indicate that increases in noise levels would be 3 to 4 dB compared with the existing condition and 1 to 2 dB compared with the future no-build scenario. The traffic noise level in the design year is predicted to exceed the NAC of 67 dBA L_{eq}(h) in Area A without the project. However, none of the modeled receptors would experience a substantial (12 dB or greater) increase in noise compared with the existing condition.

Various abatement options were considered in the *Noise Impact Analysis*. However, because of the configuration and location of the project, abatement in the form of noise barriers was the only abatement that was considered feasible. Traffic noise abatement measures in the form of noise walls were considered for the noise-sensitive land use areas predicted to exceed the NAC. FHWA's Traffic Noise Model (TNM®) was used to predict noise wall performance (insertion loss or noise reduction). Construction of soundwalls along the east (northbound) side of Figueroa Street was considered, but was determined to not be feasible because of the presence of driveways for the residences and daycare center in the area. Construction of an acoustically effective soundwall would not be possible because of the breaks in the wall that would be necessary to allow for access to the properties. Because the minimum insertion loss of 5 decibels or more would not be achieved, both the barriers considered would not be feasible to construct. Also, based on LAHD's public outreach for Berth 136-147 Terminal (TraPac) project, the community is against the construction of sound walls in the project area.

The traffic noise modeling results indicated that traffic noise levels at planned, designed and programmed future recreational land uses in Area B are predicted to be 62 dBA L_{eq}(h) in the design year with the project, and that the increase in noise compared to the existing condition would be zero to one dB in the design year. Because the traffic noise level in the design year is not predicted to approach or exceed the NAC of 67 dBA L_{eq}(h) or result in a substantial increase in noise, noise abatement does not need to be considered in this area. Thus, noise impacts would not be adverse under NEPA or significant under CEQA.

Avoidance, Minimization, and/or Mitigation Measures

NOI-1 All equipment shall have sound-control devices that are no less effective than those provided on the original equipment. No equipment shall have an unmuffled exhaust.

NOI-2 As directed by LAHD, the contractor shall implement appropriate additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.

NOI-3 Noise control shall conform to the provisions in Section 14-8.02, "Noise Control," of the Standard Specifications and these special provisions. The noise level from the contractor's operations, between the hours of 7:00 a.m. and 7:00 p.m., shall not exceed 86 dBA at a distance of 50 feet. Construction equipment shall not be operated, nor shall the engines of this equipment be allowed to run, between the hours of 7:00 p.m. and 7:00 a.m. or on Sundays, except that within the limits of the project and subject to control of the engineer, equipment may be operated during the restricted hours to:

- Service traffic control facilities;
- Service construction equipment;
- Perform work that the contract specifies be done during restricted hours; and
- Saw transverse weakened plane joints in concrete pavement.

Minor deviations from this section concerning hours of work that do not significantly change the cost of the work may be permitted upon written request of the contractor if, in the opinion of the engineer, the work will be expedited and will not cause adverse public reaction.

The requirements in this section shall not relieve the contractor from responsibility for complying with local ordinances regulating noise levels outside the limits of the state right-of-way.

The noise level requirement specified herein shall apply to equipment on the job or related to the job, including trucks, transit mixers, or transient equipment that may or may not be owned by the contractor. The use of loud sound signals shall be avoided in favor of light warnings, except those required by safety laws for the protection of personnel.

2.3 Biological Environment

2.3.1 Natural Communities

This section of the document discusses natural communities of concern. The information presented in this section is based on the November 2009 *Natural Environment Study (Minimal Impacts)* report prepared for the proposed project (ICF International 2009). The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value. Wetlands and other waters are discussed in Section 2.3.2, below.

Regulatory Setting

There is no specific regulatory setting for natural communities apart from what is required by NEPA and CEQA.

Affected Environment

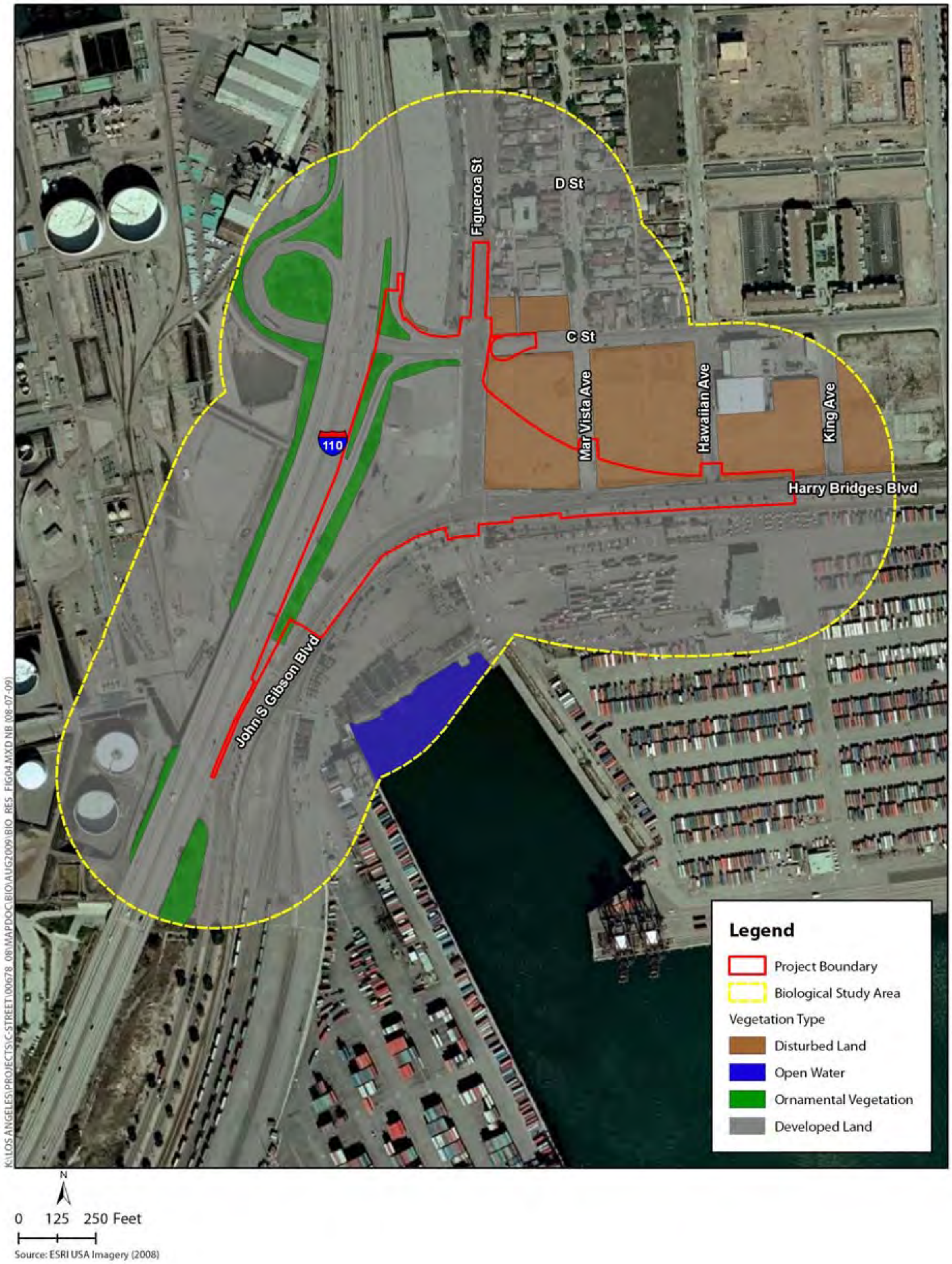
A query of the California Natural Diversity Database (CNDDB) (California Department of Fish and Game 2009) for the Torrance USGS 7.5-minute quadrangle identified three sensitive natural vegetation communities that historically occurred within the region. These communities are southern coastal bluff scrub, southern coastal salt marsh, and southern dune scrub. None of these sensitive natural vegetation communities were observed within the Biological Study Area (BSA). Figure 2-14 shows the BSA for the proposed project.

Within the BSA, there are a few vacant lots that consist of bare ground that supports a mix of nonnative grasses and ruderal (weedy) annual herbaceous plants. In addition, ornamental plantings occur throughout the area. The vegetation found within the BSA is common to a built environment in an urban setting. Open water can be found on the southern end of the BSA; this occurs within a shipping terminal for the port. The remainder of the BSA is entirely developed. No sensitive natural communities occur within the BSA.

Because the BSA is predominately developed with patches of ornamental or ruderal vegetation, there is no potential for a wildlife corridor or linkage to be present.

The West Basin provides Essential Fish Habitat (EFH) for Pacific Coast groundfish and coastal pelagic species.

Figure 2-14: Biological Study Area



Environmental Consequences

Construction Impacts/Operational Impacts

Alternative 1: No-Build Alternative

The No-Build Alternative would result in no construction or changes to existing conditions within the BSA. Therefore, the No-Build Alternative would not result in any adverse effects under NEPA or significant impacts under CEQA on natural communities.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

No natural communities are present within the BSA. The Build Alternative would alter the existing roadway configuration and result in operational changes from the existing conditions. Construction of the roadway would not have an adverse effect under NEPA or significant impact under CEQA on natural communities.

Because a portion of the West Basin is found within the BSA, runoff from construction activities may have an indirect effect/impact on EFH areas. However, given that the limits of disturbance are separated from the West Basin by an active industrial area and roadways, any potential effects/impacts would be minimal. There would be no adverse effect under NEPA or significant impact under CEQA on natural communities. Implementation of the BMPs listed below would ensure that no effects/impacts occur related to EFH areas.

Avoidance, Minimization, and/or Mitigation Measures

To prevent runoff into the West Basin area during construction, standard BMPs shall be implemented. These include:

- Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements;
- Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into sensitive habitats (i.e., EFH) and in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project-related spills of hazardous materials shall be reported to appropriate entities, including applicable jurisdictional city, U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Game (CDFG), and RWQCB agencies. The spills shall be cleaned up immediately and contaminated soils removed to approved disposal areas; and
- Construction employees shall strictly limit activities, vehicles, equipment, and construction materials at the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. Employees shall be instructed that their activities are restricted to the construction areas.

Additionally, standard BMPs for water quality and stormwater runoff mention in section 2.2.2 (pages 2-86 through 2-89), along with BMPs listed above, would ensure that impacts from runoff from the project would be minimized.

2.3.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the CWA (33 USC 1344) is the primary law regulating wetlands and other waters. The CWA regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that looks at hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present under normal circumstances for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that the discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation’s waters would be significantly degraded. The Section 404 permit program is run by USACE, with oversight from EPA.

The Executive Order for the Protection of Wetlands (EO 11990) regulates activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as FHWA, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds that 1) there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by CDFG and the RWQCBs. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600–1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFG before beginning construction. If CDFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFG jurisdictional limits are usually defined by the tops of the stream or lake banks or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from CDFG.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCBs also issues water quality certifications in compliance with Section 401 of the CWA. Please see the Water Quality section for additional details.

Section 404 of the federal CWA, which is administered by the USACE, regulates the discharge of dredged or fill material into waters of the United States. USACE has established a series of nationwide permits that authorize certain activities in waters of the United States, provided that a proposed activity can demonstrate compliance with standard permit conditions. Normally, the USACE requires an individual permit for activities affecting an area equal to or in excess of 0.5 acre of waters of the United States. Projects affecting less than 0.5 acre of waters of the United States can normally be conducted pursuant to one of the nationwide permits, if consistent with standard permit conditions.

Stormwater discharges associated with construction activities, including clearing, grading, excavation, reconstruction, and dredge or fill activities resulting in the disturbance of 1 acre or more, are required to demonstrate compliance with the General Construction Activity Stormwater Permit pursuant to the NPDES permit regulated by the RWQCB and Section 402 of the federal CWA. Construction activities associated with the proposed project must be consistent with the requirements of the General Construction Activity Stormwater Permit.

Affected Environment

A delineation for jurisdictional waters and wetlands was not performed for this project because no natural water features occur within the limits of disturbance. A small portion of the West Basin of the port is located at the edge of the BSA. The West Basin is separated from the limits of disturbance by a road, a railroad track, and an industrial area. The West Basin is located more than 250 feet from the limits of disturbance, and the area is heavily used as a shipping terminal at the port.

No jurisdictional drainage water features are present within the limits of disturbance.

Environmental Consequences

Construction Impacts/Operational Impacts

Alternative 1: No-Build Alternative

Because there would be no construction activities and no changes to existing conditions under the No-Build Alternative, there would be no adverse effects under NEPA or significant impacts under CEQA on jurisdictional waters or wetlands.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

As described above, the only jurisdictional feature (West Basin) occurring within the BSA is within the port shipping terminal. Because of the distance of this feature from the project site (more than 250 feet from the limits of disturbance) and the existing activities within the shipping terminal, construction activities and operation of the proposed project are not expected to have a direct or indirect adverse effect under NEPA or significant impact under CEQA on this jurisdictional feature.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance and minimization measures described above under Section 2.3.1, Natural Communities, would further reduce impacts to wetlands and other waters.

2.3.3 Plant Species

Regulatory Setting

USFWS and CDFG share regulatory responsibility for the protection of special-status plant species. Special-status species are selected for protection because they are rare and/or subject to population and habitat declines. Special-status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species section (Section 2.3.5) in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFG fully protected species and species of special concern, USFWS candidate species, and non-listed California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 USC Section 1531, et seq. (see also 50 CFR Part 402). The regulatory requirements for CESA can be found at California Fish and Game Code Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code Sections 1900–1913, and CEQA, Public Resources Code Sections 2100–21177.

The City of Los Angeles has tree removal policies and ordinances requiring all removed trees to be replaced, whether they are native or not.

Affected Environment

Prior to any fieldwork, a query of the CNDDB and CNPS databases was performed to identify special-status plant species within the vicinity of the BSA. Species that are endangered or threatened under FESA and CESA are discussed in Section 2.3.5.

No special-status plants were observed during the site visit in January 2009. No potentially suitable conditions for special-status plants are present within the BSA. This conclusion is based on the species' requirements, which pertain to one or more of the following: soils, hydrology, habitat, elevation range, and/or disturbance tolerance.

Environmental Consequences

Construction Impact/Operational Impacts

Alternative 1: No-Build Alternative

Because there would be no construction activities or change in existing conditions under the No-Build Alternative, there would be no adverse effects under NEPA or significant impacts under CEQA on special-status plant species.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Because there is no potential for special-status plants to occur within the BSA, no adverse effects under NEPA or significant impacts under CEQA would occur from construction activities or operation of the proposed project.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required.

2.3.4 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts on wildlife. The National Oceanic and Atmospheric Administration (NOAA) Fisheries, USFWS, and CDFG are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.5, below. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern, USFWS or NOAA Fisheries candidate species, and species tracked by CNDDB.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act,
- Migratory Bird Treaty Act (MBTA), and
- Fish and Wildlife Coordination Act.

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act,
- Sections 1600–1603 of the California Fish and Game Code, and
- Sections 4150 and 4152 of the California Fish and Game Code.

Affected Environment

A total of 16 vertebrate species were detected during the site visit. Detected wildlife consisted of one reptile species, 14 birds, and one mammal. All of the animal species detected are fairly common in urban settings and tolerant of human development. The common species detected were western fence lizard (*Sceloporus occidentalis*), black phoebe (*Sayornis nigricans*), European starling (*Sturnus vulgaris*), house finch (*Carpodacus mexicanus*), and Botta's pocket gopher (*Thomomys bottae*).

No special-status animals were detected within the BSA during the site visit. A number of state species of special concern (listed) and species tracked by CNDDB (non-listed) have been recorded within the vicinity of the BSA. The following bird species are tracked by CNDDB and have the potential to forage within the harbor portion of the BSA: double-crested cormorant (*Phalacrocorax auritus*), California gull (*Larus californicus*), and elegant tern (*Thalasseus elegans*). Black skimmer (*Rynchops niger*) is a state species of special concern and also has the potential to forage within the harbor portion of the BSA. Foraging potential for these species ranges from low to moderate. None of these species would nest within the BSA.

The CNDDB query did not identify any marine mammals within the vicinity of the BSA. No suitable habitat for any other species with special status occurs within the BSA.

Numerous trees and shrubs within the BSA provide suitable nesting and roosting habitat for native bird species, including raptors, protected under the MBTA. Furthermore, most of these bird species are also covered under similar protective statutes found in the California Fish and Game Code.

Environmental Consequences

<u>Construction Impacts/Operational Impacts</u>

Alternative 1: No-Build Alternative

The No-Build Alternative would not result in any construction activities or changes to the existing environment; thus, no adverse effects under NEPA or significant impacts under CEQA would occur.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Of the special-status species that could forage within the BSA, foraging activities would occur primarily outside of the project footprint, within the harbor portion of the BSA. Thus, no adverse effects under NEPA or significant impacts under CEQA would occur related to special-status species. Because the BSA consists of an urbanized setting, any potential indirect effects of construction activities and operations would be no greater than existing conditions. Thus, no adverse effects under NEPA or significant impacts under CEQA would occur.

The Build Alternative would remove potential nesting trees for non-listed breeding birds. Removal of active nests during the bird breeding season (February 15 through September 1) could result in adverse effects under NEPA or significant impacts under CEQA. Implementation of BIO-1 would ensure that effects on native birds and/or raptors would not be adverse under NEPA or significant under CEQA.

Avoidance, Minimization, and/or Mitigation Measures

BIO-1 To avoid impacts on non-listed birds protected under the federal MBTA and similar state statutes, one of the following shall be implemented:

- No ground disturbance, site clearing, or removal of any potential nesting habitat shall be conducted within the typical breeding/nesting season for birds (February 15 to September 1) or;
- If construction shall occur during the bird breeding season, prior to any ground disturbing activities, a qualified biologist shall conduct surveys for nesting birds (including raptors). The surveys shall occur a minimum of 3 days prior to clearing, removal, or trimming of any vegetation. Surveys shall include areas within 200 feet of the edge of the project boundary (as legally accessible) and the entire project site. If active nests are found, a 100-foot (minimum) temporary fence barrier shall be erected around the nest site. For raptor nests that are found, a 250-foot buffer from construction activities shall be required. No habitat removal or any other work shall be allowed to occur within the fenced nest zone until a qualified biologist confirms that the nest is not longer active and/or the young have fledged.

2.3.5 Threatened and Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is FESA (16 USC Section 1531, et seq. [see also 50 CFR Part 402]). This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies such as FHWA are required to consult with USFWS and NOAA Fisheries to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an Incidental Take statement. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, CESA, California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts on rare, endangered, and threatened species and develop appropriate planning to offset project-caused losses of listed species and their essential habitats. CDFG is the agency responsible for implementing CESA. Section 2081 of the California Fish and Game Code prohibits take of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions, an incidental take permit is issued by CDFG. For projects requiring a Biological Opinion under Section 7 of FESA, CDFG may also authorize impacts on CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Affected Environment

Eight state and/or federally listed plant species and one federal candidate plant species were evaluated to determine whether the BSA provides suitable habitat. These species are Ventura marsh milk-vetch (*Astragalus pycnostachys* var. *lanosissimus*), coastal dunes milk-vetch (*Astragalus tener* var. *titi*), San Fernando spineflower (*Chorizanthe parryi* var. *fernandina*), salt marsh bird's-beak (*Cordylanthus martimus* ssp. *maritimus*), beach spectacledpod (*Dithyrea maritima*), spreading navarettia (*Navarettia fossalis*), California orcutt grass (*Orcuttia californica*), Lyon's pentachaeta (*Pentachaeta lyonii*), and Brand's star phacelia (*Phacelia stellaris*). None of these species were detected within the BSA, and no suitable habitat is found within the area.

The state and/or federally listed animals evaluated for potential to occur within the BSA are Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*), El Segundo blue butterfly (*Euphilotes battoides allyni*), Mohave tui chub (*Gila bicolor mohavensis*), California brown pelican (*Pelecanus occidentalis californicus*), American peregrine falcon (*Falco peregrinus anatum*), western snowy plover (*Charadrius alexandrius nivosus*), California least tern (*Sternula antillarum browni*), California black rail (*Laterallus jamaicensis coturniculus*), coastal California gnatcatcher (*Polioptila californica californica*), southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), and Pacific pocket mouse (*Perognathus longimembris pacificus*). The species with potential to occur within the BSA as a forager are California brown pelican, American peregrine falcon, and California least tern. The remaining species have no potential to occur because there is no suitable habitat present.

Environmental Consequences

<u>*Construction Impacts/Operational Impacts*</u>

Alternative 1: No-Build Alternative

The No-Build Alternative would not result in any construction activities or changes in the existing setting; thus, no adverse effects under NEPA or significant impacts under CEQA would occur.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Informal consultations with USFWS and the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) were initiated, and concurrence with the finding of Not Likely to Adversely Affect is anticipated (see Section 3.2.1 and the *Natural Environment Study [MI]*). No potentially suitable conditions for listed plant species occur within the BSA. Therefore, no effect/take under Section 7 of the FESA or the CESA would occur under the Build Alternative.

Of the listed animal species that could forage within the BSA, foraging activity is expected to occur outside of the project footprint, within the harbor portion of the BSA. However, because the BSA consists of an urbanized setting with no potentially suitable resources, none of these special-status species are expected to nest or roost within the BSA. Under the Build Alternative, direct impacts are not anticipated because of the lack of suitable habitat. Because the BSA consists of an urbanized setting, any potential indirect effects/impacts of construction would be no greater than they would be under existing conditions. No effect/take under Section 7 of the FESA or the CESA would occur under the Build Alternative.

No adverse effects under NEPA or significant impacts under CEQA would occur.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required.

2.3.6 Invasive Species

Regulatory Setting

On February 3, 1999, President Clinton signed Executive Order 13112, requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” FHWA guidance issued on August 10, 1999, directs the use of the state’s noxious weed list to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

Affected Environment

Numerous noxious weeds were observed within the BSA. Noxious weed species include those designated as federal noxious weeds by the U.S. Department of Agriculture, species listed by the California Department of Food and Agriculture (CDFA), and other exotic pest plants designated by the California Invasive Plant Council (Cal-IPC). Table 2-57 identifies the noxious weed species found within the BSA.

Table 2-57: Noxious Weed Species Observed within the Biological Study Area

Scientific Name	Common Name	California Department of Food and Agriculture Code*	California Invasive Plant Council**
Avena barbata	Slender wild oat	None	Moderate
Bromus diandrus	Ripgut grass	None	Moderate
Bromus madritensis	Spanish brome	None	High
Cenchrus longispinus	Southern sandbur	C List	None
Cortaderia selloana	Selloa pampas grass	None	High
Cynodon dactylon	Bermuda grass	C List	Moderate
Erodium cicutarium	Red-stem filaree	None	Limited
Eucalyptus globules	Tasmanian blue gum	None	Moderate
Hirschfeldia incana	Short-pod mustard	None	Moderate
Hordeum murinum	Glaucous barley	None	Moderate
Lolium multiflorum	Italian ryegrass	None	Moderate
Medicago polymorpha	California burclover	None	Limited
Nicotiana glauca	Tree tobacco	None	Moderate
Pennisetum setaceum	Fountain grass	None	Moderate
Picris echioides	Bristly ox-tongue	None	Limited
Piptatherum miliaceum	Smilo grass	None	Limited
Raphanus sativus	Wild raddish	None	Limited
Ricinus communis	Castor-bean	None	Limited
Salsola tragus	Tumbleweed	C List	Limited
Schismus barbatus	Mediterranean schismus	None	Limited
Sisymbrium irio	London rocket	None	Moderate
Tribulus terrestris	Puncture vine	C List	None
Washingtonia robusta	Mexican fan palm	None	Moderate
*Codes (California Department of Food and Agriculture 2006). **Codes (California Invasive Plant Council 2006).			

Environmental Consequences

Construction Impacts/Operational Impacts

Alternative 1: No-Build Alternative

Under the No-Build Alternative, no construction activities or any change from the existing environment would occur. Thus, no adverse effects under NEPA or significant impacts under CEQA would occur related to invasive species.

Alternative 2: Build Alternative (Northbound Off-Ramp to Harry Bridges Boulevard)

Construction and operational activities related to implementation of the Build Alternative have the potential to result in the introduction and spread of noxious weeds. This could result in adverse effects under NEPA or significant impacts under CEQA. To ensure the project does not promote the introduction or spread of invasive species, mitigation measures BIO-3 through BIO-6 would apply. With implementation of mitigation measures, the impacts would be less than significant under CEQA, and no substantial adverse effects would occur under NEPA.

Avoidance, Minimization, and/or Mitigation Measures

BIO-2 Construction equipment shall be cleaned of mud or other debris that may contain invasive plants and/or seeds. Equipment shall also be inspected before arriving to the site and before leaving the site during the course of construction to reduce the potential of spreading noxious weeds.

BIO-3 All targeted vegetative material shall be immediately removed from the project area. This includes small cuttings, leaves, branches, seeds, and vegetative litter.

BIO-4 Trucks with loads carrying vegetation shall be covered and vegetation materials removed from the site shall be disposed of in accordance with applicable laws and regulations.

BIO-5 Any areas within the limits of disturbance that remain unvegetated after construction has been completed shall be hydroseeded with a seed mix restricted to local natives to promote recolonization of native vegetation. In addition, any landscaping within the BSA associated with this project shall use native plant species. This measure would reduce the risk of providing optimal conditions for invasive species to colonize the area.

2.4 Cumulative Impacts

2.4.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts on resources in the project area may result from residential, commercial, industrial, and highway development as well as agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and the introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

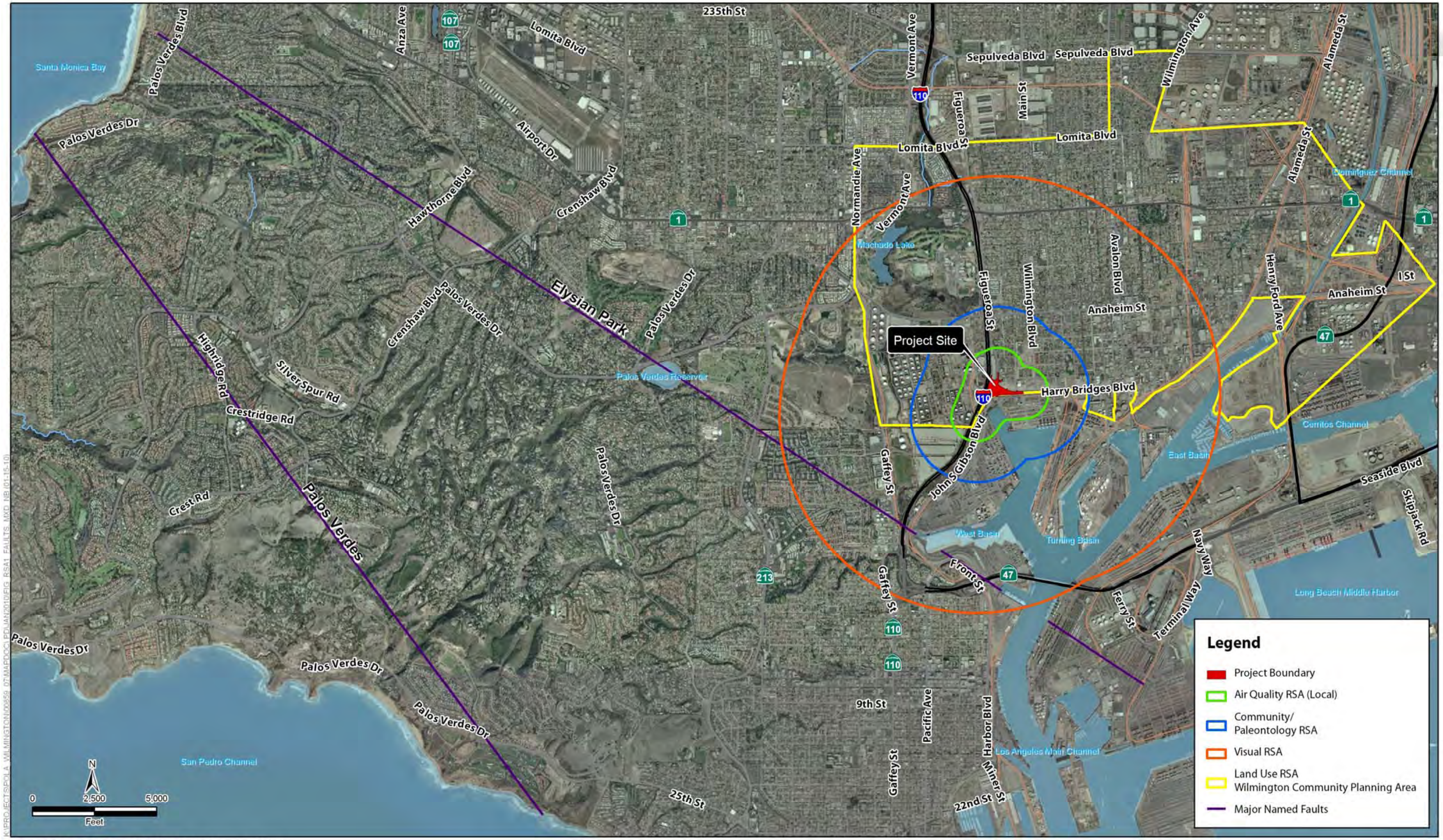
State CEQA Guidelines Section 15130 describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the State CEQA Guidelines. A definition of cumulative impacts under NEPA can be found in 40 CFR Section 1508.7 of the CEQ regulations.

The proposed project would have no effect on agricultural resources, population and housing, parks and recreation, or mineral resources, and no businesses or residences would be acquired. Therefore, the project would not contribute either directly or indirectly to a cumulatively considerable impact in these resource areas. Therefore, the potential for the proposed project to result in cumulatively impacts that would be considered significant under CEQA or adverse under NEPA in the aforementioned areas is low, and the proposed project does not have the potential to result in a cumulative impact that would affect the health or sustainability of any of these resources.

The proposed project would have project-level direct or indirect effects on aesthetics, air quality, biological resources, archaeological resources, paleontological resources, geology and soils, hydrology and water quality, noise, public services, utilities, transportation, and hazardous materials. The potential for cumulatively considerable impacts in these resource areas is discussed below.

The cumulative impact analyses included in this section considered projects that are currently proposed, approved, or under construction within the Port of Los Angeles and the communities of Wilmington and San Pedro in City of Los Angeles as of August 2009. A list of projects included in the analysis is presented in Table 2-1. Figures2-15a through 2-15c show the Resource Study Area (RSA) for cumulative impacts of various resources.

Figure 2-15a: Resource Study Area for Cumulative Impacts



SOURCE: ESRI Streetmap USA (2008), ESRI Imagery (2007)

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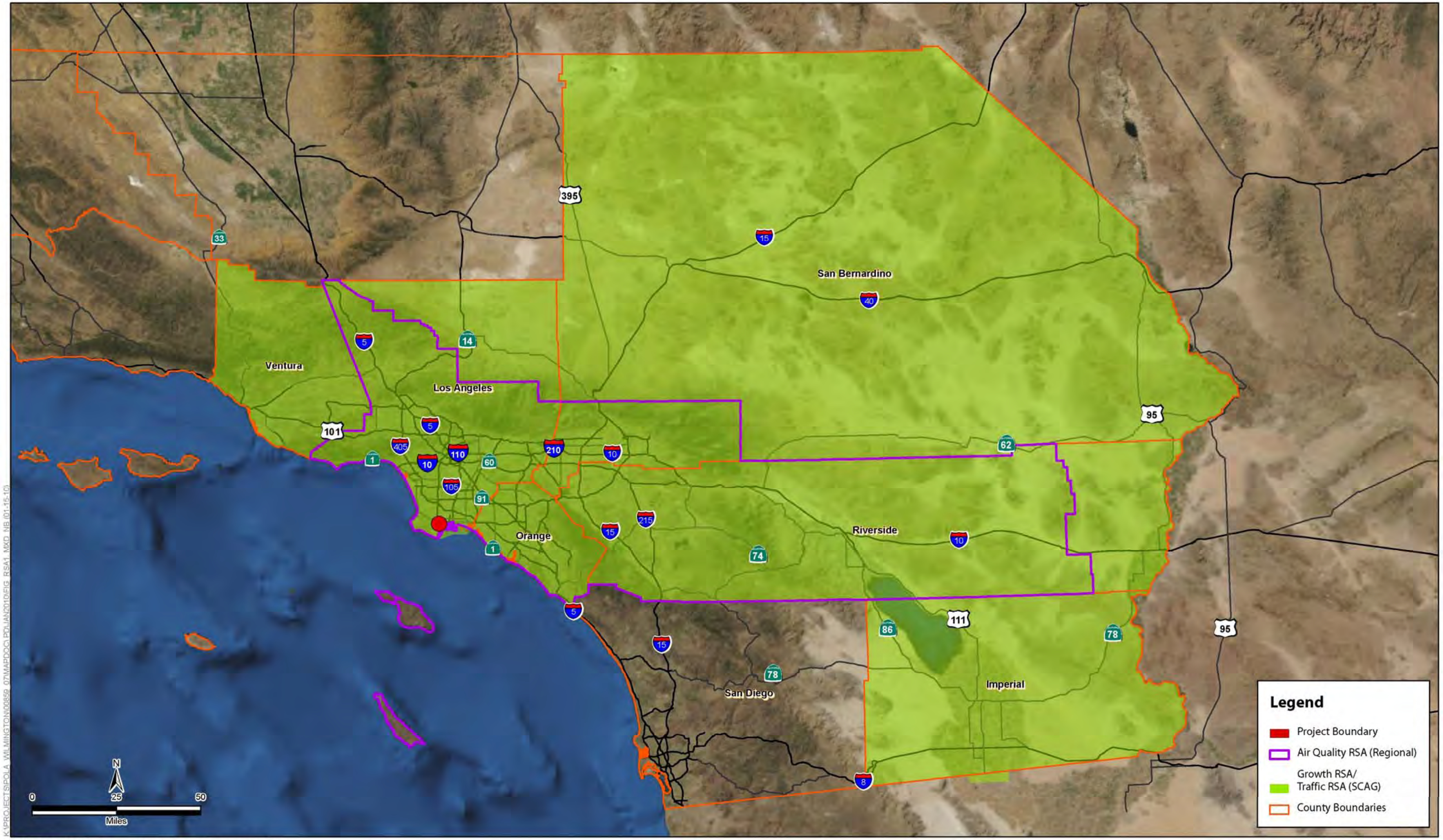
Figure 2-15b: Resource Study Area for Cumulative Impacts



SOURCE: ESRI Streetmap USA (2008), ESRI Imagery (2007)

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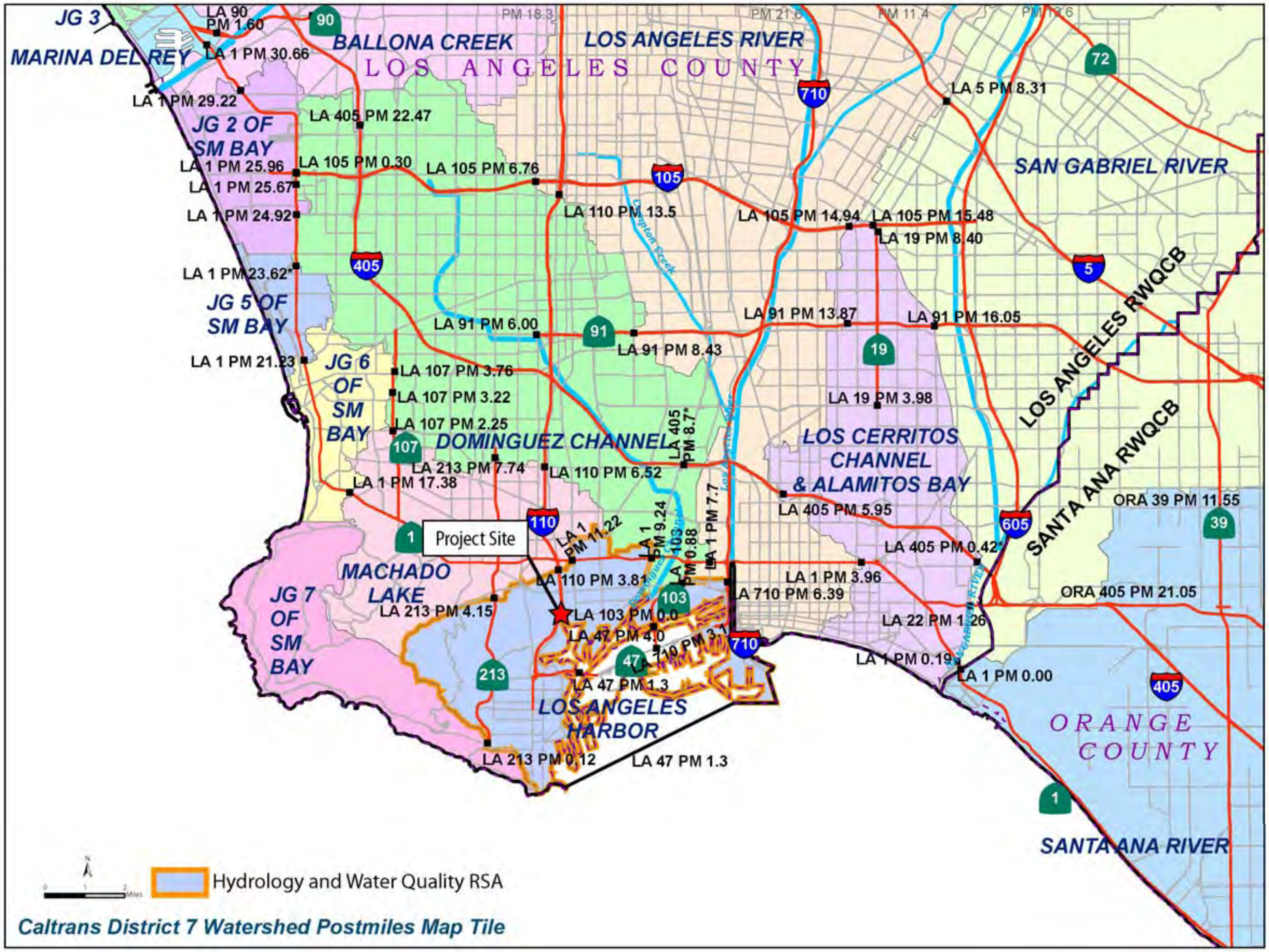
Figure 2-15c: Resource Study Area for Cumulative Impacts



2.4.2 Land Use/Community Impacts

Affected Environment

Resource Study Area: As shown in Figure 2-15a, the geographic RSA boundary used in the assessment of cumulative impacts involving land use and/or community resources is defined at various levels from regional to local. For land use and planning, the appropriate RSA is the geographical extent of the City of Los Angeles' Wilmington community. For community impacts, the appropriate RSA is identified as the area located within 0.5 mile of the project (shown in Figure 2-15a).

Existing Conditions within RSA: The I-110/C Street interchange improvements would occur within Wilmington community in the City of Los Angeles, which is fully urbanized. Land uses in the vicinity of the I-110/C Street interchange consist of both industrial and residential uses. The port facilities directly south of the project site and the industrial warehouse facilities east of the northbound on-ramp make up the industrial land uses within the project vicinity. The area near the D Street/Figueroa Street intersection, east of the project site, is for residential use. Finally, the area between C Street and Harry Bridges Boulevard, east of Figueroa Street and the northbound off-ramp, has been developed as a green-space buffer between port facilities and the residential community. It is owned by the City of Los Angeles.

Environmental Consequences

Potential Direct and/or Indirect Impacts within RSA: The proposed project would not result in any change in land use or zoning and would comply with the pertinent general plan policies. The planned improvements would require no additional right-of-way acquisition. All land required for improvement is publicly owned. There would be a transfer of property among the City of Los Angeles, Los Angeles Harbor Department, and Caltrans for the proposed project due to the realignment of roadways. No displacements would occur, and relocations would not be necessary. The proposed improvements (project number LA0F030) are consistent with the project description in the 2008 RTIP and the 2008 RTP. The proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the proposed project (including a general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the project is consistent with local plans and policies and would not result in any adverse impacts, either individually or cumulatively, on land use and planning.

The proposed project would result in temporary construction-period impacts that would affect the community; however, these would be minimized through the preparation and implementation of a TMP. Access to businesses and residences would be maintained during construction.

Current and Reasonably Foreseeable Projects within RSA: Table 2-1 provides a list of the 36 related projects within the Port of Los Angeles, Wilmington, and San Pedro. Most of the projects listed in Table 2-1 are port-related projects. The Harry Bridges Boulevard buffer, the only contiguous project, has recently been constructed. Thus, the related projects would not result in adverse effects on the community.

Cumulative Impact Potential: The potential for impacts on land use and planning and the community at large as a result of the proposed project is low. In addition, the other approved local projects (related projects) do not include major capital improvements or projects that would result in changes in land use. The related projects are expected to comply with environmental regulations and other local plans and policies and would likely be consistent with any land use plans. The TMP prepared for each project (as discussed under mitigation measures LU-1, C-1, and TR-1) would take into account cumulative projects within its vicinity. Based on the low potential for impacts as a result of the proposed project and the small scale of the related projects, the proposed project would not result in any cumulatively considerable land use and planning or community impacts.

Avoidance, Minimization, and/or Mitigation Measures

The TMP prepared according to mitigation measures LU-1, C-1, and TR-1 would minimize any construction impacts on land use and the community. No adverse cumulative impacts related to land use and planning or the community are anticipated as a result of the project, and no additional avoidance, minimization, and/or mitigation measures are proposed.

2.4.3 Growth

Affected Environment

Resource Study Area: The geographic RSA boundary used in the assessment of cumulative impacts involving growth is defined as the extent of regional plans, such as the RTIP and RTP (shown in Figure 2-15b). SCAG is the MPO in the region for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial and is responsible for forecasting population trends and growth scenarios in the region. The area covered by the related projects identified in Table 2-1 and shown in Figure 2-3 is included within the regional plan area identified as the RSA for growth.

Existing Conditions within RSA: The SCAG region is the second most populous metropolitan region in the nation. The U.S. census reported the 2000 population of the SCAG region as 16,516,006. More than 6 percent of the nation’s population lives in the SCAG region, and for more than half a century the region has been home to half the population of California (SCAG 2008a). The SCAG region gained almost 1.9 million people between 1990 and 2000, and the California Department of Finance estimates that the region has added yet another 2.2 million since 2000.

Environmental Consequences

Potential Direct and/or Indirect Impacts within RSA: The proposed project would improve an existing transportation facility. I-110, C Street, and Harry Bridges Boulevard are existing roadways, and the right-of-way has been reserved for the future interchange. The proposed improvements (project number LA0F030) are consistent with the project description in the current 2008 RTIP and the 2008 RTP. The project and cumulative development are accounted for and forecast in the regional plans. The proposed project would not have a significant impact with respect to growth inducement. Therefore, the proposed project is neither intended nor expected to induce any substantial change in the location, distribution, or rate of population and housing growth. The proposed project would not result in any substantial direct or indirect impacts on growth.

Current and Reasonably Foreseeable Projects within RSA: In the current RTP and RTIP, there are many roadway improvement projects proposed in the region that would decrease travel times and reduce congestion on existing roadways. However, this would result in a beneficial impact on air quality if congestion is reduced. The regional plans have analyzed the cumulative impacts of all projects and have identified feasible avoidance, minimization, and mitigation measures. SCAG has forecast foreseeable growth in the region until 2035 and analyzed impacts of population increases.

Cumulative Impact Potential: The potential for impacts related to growth inducement as a result of the proposed project is low. In addition, the other approved local projects include only one new residential project, which is an infill project in an already built-up area. This would not result in a substantial shift in population growth or distribution or make areas previously inaccessible to growth accessible. As stated in the program EIR for the 2008 RTP, in specific areas of the region, the 2008 RTP would likely induce growth by providing new and improved access; however, overall, the 2008 RTP would accommodate and facilitate growth in the region (SCAG 2008a). Therefore, it is expected that regional plans have accounted for growth in the region and have strategies in place to accommodate growth. Moreover, the proposed project would not link two independent communities or introduce new linkages. As such, the project would not contribute to adverse cumulative growth impacts in the region.

Avoidance, Minimization, and/or Mitigation Measures

No adverse cumulative impacts involving growth as a result of the project are anticipated, and no avoidance, minimization, and/or mitigation measures are proposed.

2.4.4 Utilities/Emergency Services

Affected Environment

Resource Study Area: The RSA for utilities/emergency services is the area covered by the project and the related projects (shown in Figure 2-3). Within the project area, if construction activities occur concurrently, there is the potential for detours that affect emergency services and disruptions to utility services.

Existing Conditions within RSA: The RSA is highly urbanized and well served by utilities and emergency services. All areas of the RSA are equally served by emergency service providers such as fire and police. The service ratios for police and fire services are acceptable. No issues related to lack of utilities or emergency services are known.

Environmental Consequences

Potential Direct and/or Indirect Impacts within RSA: During construction of the project, there would be potential for direct and indirect impacts on emergency services. Although I-110 would remain open throughout construction, construction activities could result in lane closures along I-110 for short periods of time**.** This may affect emergency response times to some parts of the study area. Avoidance and minimization measures are proposed, including the preparation of a TMP and notifying local emergency services of proposed construction activities. This would ensure that emergency services have adequate information to plan detour routes. The project in the long term would benefit emergency services by reducing congestion and improving travel time.

With respect to utilities, construction activities, such as the relocation of utility lines along Figueroa Street and Harry Bridges Boulevard, may result in service disruptions within the RSA. However, construction activities would be coordinated with utility providers, and those in the area to be affected by service disruptions would be notified in advance. Such effects would be minor and temporary. In the long term, the proposed project would not result in any adverse effects pertaining to utilities.

Current and Reasonably Foreseeable Projects within RSA: Table 2-1 provides a list of the approved related projects at the Port of Los Angeles and in the communities of Wilmington and San Pedro. Of the 36 projects, five are interchange and roadway improvements, one is a port-wide transportation master plan project, 21 are port-related development projects, and the rest are other development projects in San Pedro, Wilmington, Lomita, and Torrance. Except for the Wilmington grade separation project, the I-110/SR-47 Connectors Improvement Program, the I-110/John S. Gibson Boulevard interchange improvement project, and TraPac terminal project, none of the projects is located close to the project site or along I-110.

Cumulative Impact Potential: Construction activities for one or more of the related projects in the area could result in temporary, localized, site-specific disruptions, including partial and/or complete street and lane closures and detours. If the activities occur at the same time, this could cumulatively increase response times for emergency vehicles during construction. Potential disruptions to utilities and emergency services could be avoided through implementation of mitigation measures LU-1, C-1, TR-1, U&ES-1, and U&ES-2. The preparation of a TMP (under mitigation measures LU-1, C-1, TR-1, and U&ES-2) would take into consideration other projects in the area. The TMP would include provisions to notify the local fire station and any potentially affected residents at least 2 weeks in advance of any planned partial or complete street closures or traffic diversions. Similarly, simultaneous construction activities for the proposed project and other related projects could result in temporary utility disruptions. However, efforts would be made to coordinate with affected utility providers and notify affected residents 2 weeks in advance of any service disruption. Therefore, the cumulative effects of construction, should they occur, would be minor and temporary.

Avoidance, Minimization, and/or Mitigation Measures

No adverse cumulative impacts on utilities/emergency services are anticipated as a result of the project, and no avoidance, minimization, and/or mitigation measures are proposed.

2.4.5 Traffic and Transportation/Pedestrian and Bicycle Facilities

Affected Environment

Resource Study Area: The SCAG region covered under the RTP and RTIP, as shown in Figure 2-15b, is the appropriate RSA for evaluating cumulative impacts at a regional level. For localized effects, area covered by the 36 related projects listed in Table 2-1 is considered the RSA (shown in Figure 2-3).

Existing Conditions within RSA: At the regional level, the regional transportation system is currently operating at capacity during peak periods. The highway system shows substantial freeway congestion in the morning and evening peak periods, with random episodes of incident-related (i.e. accident) congestion throughout the day. At the local level, port growth and other local and regional growth, has added daily and peak hour trips to the roadway system. Even with this growth, most local study intersections operate at acceptable LOS.[31] Traffic estimated under the no-build scenario reflects trips generated by other planned regional development.

Environmental Consequences

Potential Direct and/or Indirect Impacts within RSA: Once constructed, the project would result in a beneficial impact on regional and local traffic conditions and access. The project would not result in deterioration of levels of service at any intersections or roadway segments.

Current and Reasonably Foreseeable Projects within RSA: The long-term operation of the proposed Project, in combination with other current and reasonably foreseeable future projects shown in Table 2-1, would result in significant cumulative impacts on the road transportation network by degrading LOS at one of the analyzed intersections to unacceptable levels. To analyze the cumulative impacts, transportation modeling was used to predict the future LOS at key intersections based on the proposed Project along with other projected future port growth and all other cumulative projects in Table 2-1 as well as other sources of local and regional growth. Based on this, the growth rate and the forecasted traffic volumes for 2014 (the year of construction completion) and 2035 (the design year for this project) were calculated.

Cumulative Impact Potential: At the regional level, the proposed project is included in 2008 RTP and RTIP. Thus the cumulative impacts from the proposed project at the regional level have been accounted for under the program Environmental Impact Report of the RTP and the proposed project would not result in cumulative impacts at the regional level.

[31] Port of Los Angeles. 2007. *Berths 136-147 Terminal Final EIS/EIR.*

At the local level, the existing I-110 Ramps/C Street & Figueroa Street and the John S. Gibson Boulevard/Harry Bridges Boulevard & Figueroa Street intersections would be reconfigured to form a single intersection in the future with the northbound I-110 off-ramp directly diverging to Harry Bridges Boulevard under the proposed project. This would improve the operational efficiency and safety of the intersection by correcting the short merge distance of the two intersections. Thus, the build conditions would provide an improvement in LOS conditions at intersections analyzed versus the no-build conditions. The freeway ramps, mainline and weaving segments would continue to operate at acceptable levels under both the build and no build scenarios. Because the proposed project would have a beneficial impact on traffic, adverse cumulative impacts are not anticipated once the project is operational. However, construction activities for one or more of the related projects in the area could result in temporary, localized, site-specific disruptions, including partial and/or complete street and lane closures and detours. If the activities occur at the same time, this could cumulatively increase response times for emergency vehicles during construction. Potential disruptions affecting utilities and emergency services could be avoided through implementation of mitigation measures LU-1, C-1, TR-1, and U&ES-2. The preparation of a TMP (under mitigation measures LU-1, C-1, TR-1 and U&ES-2) would take into consideration other projects in the area.

Avoidance, Minimization, and/or Mitigation Measures

No adverse cumulative impacts are anticipated involving traffic and transportation/pedestrian and bicycle facilities as a result of the project during operations, and no avoidance, minimization, and/or mitigation measures are proposed.

2.4.6 Visual/Aesthetics

Affected Environment

Resource Study Area: The RSA for visual resources is identified as the area within a 1.5-mile radius of the project site from which elevated structures constructed under the proposed project might be visible. The RSA is shown in Figure 2-15a.

Existing Conditions within RSA: The topography of the project area is flat, with no mature trees or landscape vegetation existing within the project vicinity. No pertinent visual resources appear within the project viewshed except for the Vincent Thomas Bridge, which is located approximately 1.5 miles southeast of the project site. The landmark bridge is eligible for listing in National Register of Historic Places. Views from the closest residential neighborhood to the project site are primarily of port-related facilities and transportation infrastructure. No views of high quality were identified within the RSA. The sensitive viewer groups for the proposed project include residents of single-family housing along Figueroa Street, users of recreational uses between C Street and Harry Bridges Boulevard, and motorists on I-110.

Environmental Consequences

Potential Direct and/or Indirect Impacts within RSA: Since the existing views for the sensitive viewer groups are dominated by transportation infrastructure, light industry and warehouses, and port-related uses, the construction of new, elevated structures would not result in substantial adverse effects. Views of the Vincent Thomas Bridge would remain unchanged for motorists on I-110 or first-row residents along the north side of C Street east of Figueroa Street.

Current and Reasonably Foreseeable Projects within RSA: Some related projects identified in Table 2-1 fall within the RSA, and some could be visible to sensitive viewer groups. During the construction phase, the presence of construction equipment, workers, and trucks could result in adverse effects; however, these impacts would be temporary in nature and of short duration. During the operational phase, most projects would not result in substantial adverse changes and would blend in with existing industrial and port-related uses.

Cumulative Impact Potential: The Build Alternative would not introduce new structural elements that would block existing views of high visual quality. Improvements would be limited largely to replacement and expansion of existing transportation facilities and port-related development. Any changes in the views in this area would be generally consistent with existing views of developed areas surrounding the project site. Implementation of minimization measures VIS-1 through VIS-4 would ensure that impacts from the proposed project are not adverse. Furthermore, the proposed project would not result in changes in views for those traveling along a designated scenic highway. Therefore, the potential for the proposed project to contribute to cumulative adverse impacts related to visual resources is considered low.

Avoidance, Minimization, and/or Mitigation Measures

No adverse cumulative impacts on visual resources are anticipated as a result of the project, and no avoidance, minimization, and/or mitigation measures are proposed.

2.4.7 Cultural Resources

Affected Environment

Resource Study Area: The RSA for cultural resources is the APE identified for the proposed project. The APE incorporates the maximum existing or proposed right-of-way and any area where ground may be disturbed by construction activities. Additionally, the APE incorporates parcels that may have potential visual and audible effects resulting from the proposed project. APE is shown in Figures 2-6a through 2-6c.

Existing Conditions within RSA: Cultural resources field surveys of all properties within the proposed APE were undertaken. None of the properties appears eligible for listing in the National Register of Historic Places. Four properties that were surveyed for the *Historical Property Survey Report* were determined to be not eligible for the National Register of Historic Places as a result of the study. There is one resource for which further study is needed: Air Raid Siren #82, located on the northwest corner of Harry Bridges Boulevard and South Figueroa Street. This resource is not individually significant but may contribute to a district of similar air raid sirens located in the City and County. However, it will not be affected by the proposed project.

No new surficial prehistoric or historical archaeological resources were observed within the proposed project's archaeological APE. The majority of the APE is a dense urban area that is developed with existing roads, railroad alignments, soundwalls, residential neighborhoods, commercial and industrial complexes, and landscape vegetation.

Environmental Consequences

Potential Direct and/or Indirect Impacts within RSA: The proposed project would not result in substantial adverse effects or significant impacts on historic or archaeological resources.

Current and Reasonably Foreseeable Projects within RSA: The area within the APE is heavily disturbed, and consequently, there is a low potential for finding archaeological resources. Only the Harry Bridges Boulevard buffer area project constructed under the TraPac terminal improvements falls within the APE. However, no archaeological resource was identified within the APE that could be affected by any related project.

Cumulative Impact Potential: The proposed project would not result in an adverse impact on cultural resources within the APE because the area is heavily disturbed. Therefore, the potential for a cumulatively considerable impact is low. However, construction activities associated with the proposed project and related projects could unearth unanticipated cultural resources and result in an adverse cumulative impact. Additionally, implementation of minimization measures CR-1 and CR-2 would ensure that any cumulative impacts, should they occur, are minimized. Related projects would implement similar mitigation measures to minimize impacts on cultural resources. Thus, cumulative impacts from the proposed project would not be substantially adverse.

Avoidance, Minimization, and/or Mitigation Measures

No adverse cumulative impacts on cultural resources are anticipated as a result of the project, and no avoidance, minimization, and/or mitigation measures are proposed.

2.4.8 Hydrology, Floodplain, Water Quality and Stormwater Runoff

Affected Environment

Resource Study Area: The proposed project is located within the Los Angeles Harbor Watershed, which drains directly into Los Angeles and Long Beach Harbors and includes portions of Los Angeles, Long Beach, Rancho Palos Verdes, and Rolling Hills. An appropriate RSA for hydrology, floodplains, and water quality and stormwater runoff has been identified as the portion of the watershed that encompasses the project limits from the northern I-110 right-of-way to the farthest extent of any downstream flows. The hydrology RSA is shown in Figure 2-15c.

Existing Conditions within RSA: The contaminants in the most recent 2006 CWA Section 303(d) list of water-quality-limited segments for the Los Angeles RWQCB, which was adopted by EPA in 2007 (Los Angeles RWQCB 2006), are listed in Table 2-11 of Section 2.2.2, Water Quality and Stormwater Runoff.

On July 1, 2004, the Los Angeles Harbor bacteria TMDL (Inner Cabrillo Beach and Main Ship Channel) was adopted by the Los Angeles RWQCB (effective March 10, 2005). The reason for the TMDL was because elevated bacterial indicator densities were causing impairments associated with water contact recreation (REC-1) and beneficial uses at Inner Cabrillo Beach and potential REC-1 uses at the Main Ship Channel in the Los Angeles Harbor.

The West Coast Basin is adjudicated and has a surface area of 91,300 acres. There are several aquifers present in the subbasin. The storage capacity of the primary water-producing aquifer, the Silverado aquifer, is estimated to be 6,500,000 acre-feet (Department of Water Resources 2004). Seawater intrusion occurs in some aquifers that are exposed to the ocean offshore. Injection wells located near Wilmington form a protective mound at the Dominguez Gap Injection Barrier. The regional water quality objectives for groundwater contained in the Basin Plan pertain to bacteria, chemical constituents and radioactivity, mineral quality, nitrogen (nitrate, nitrite), and taste and odor.

According to FEMA's FIRM and the City's flood zone mapping, the project is not located within the 100-year floodplain. However, portions of the site are identified as being within the 500-year floodplain.

Environmental Consequences

Potential Direct and/or Indirect Impacts within RSA: The proposed project has the potential to result in increases in vehicular-generated contaminants on road surfaces. Excessive stream and channel erosion may occur if runoff volumes and rates increase as a result of construction activities. Standard Caltrans BMPs, as listed in the Statewide Stormwater Quality Practice Guidelines (California Department of Transportation 2003) and mitigation measure WQ-1 through WQ-4, would be included to reduce and avoid water quality impacts. In addition, the project may result in moderate alterations to the surrounding surface drainage conditions. The proposed project would reduce the amount of impervious surface in the area, thereby having a beneficial impact with respect to the total amount of runoff. The BMPs required under the SWPPP would be implemented to prevent soil erosion and the discharge of other construction-related pollutants that could contaminate nearby water resources.

By incorporating accepted engineering practices and BMPs, impacts on the water quality of surface or groundwaters during construction or operation would be minimized.

Current and Reasonably Foreseeable Projects within RSA: The Los Angeles RWQCB has adopted a water quality control plan. The regional inland surface water quality objectives contained in the Basin Plan pertain to ammonia; bacteria; coliform; bioaccumulation; biochemical oxygen demand; biostimulatory substances; chemical constituents; chlorine; total residuals; color; exotic vegetation; floating material; methylene blue activated substances;

mineral quality; nitrogen (nitrate, nitrite); oil and grease; dissolved oxygen; pesticides; pH; polychlorinated biphenyls; radioactive substances; solid, suspended, or settleable materials; taste and odor; temperature; toxicity; and turbidity.

Basin plans provide the technical basis for determining waste discharge requirements (WDRs), taking enforcement actions, and evaluating clean water grant proposals. Basin plans are updated and reviewed every 3 years in accordance with Article 3 of the Porter-Cologne Act and CWA Section 303(c). NPDES permits issued under CWA Section 402 to control pollution must implement requirements of the applicable regional basin plans. It is assumed that all construction projects within the basin will comply with necessary permits and appropriate measures and thereby not result in adverse impacts or significant impacts.

Cumulative Impact Potential: The proposed project and other related projects would comply with BMPs and accepted engineering practices; therefore, the potential for the project to contribute to any cumulatively considerable impacts would be low.

Avoidance, Minimization, and/or Mitigation Measures

No cumulative impacts are anticipated, and no avoidance, minimization, and/or mitigation measures are proposed.

2.4.9 Geology/Soils/Seismicity/Topography

Affected Environment

Resource Study Area: The RSA for geology and soils includes the greater Los Angeles area. Although, for seismicity, the entire fault zone is the RSA (shown in Figure 2-15a).

Existing Conditions within RSA: The project site is located within the southern coastal margin of the Los Angeles Coastal Plain. The site is located within the southwestern block of the Los Angeles Basin on the San Pedro Bay portion of the southward-sloping continental shelf. The project site is relatively flat, gently sloping toward the southeast. The ground surface at the project site ranges from 10 feet above MSL in the southern part of the alignment to 20 feet above MSL in the northern part of the site. The Los Angles Coastal Plain is underlain by 9,000 to 11,000 feet of Tertiary and Quaternary sediments that have filled the presently subsiding basin since Miocene time. According to the State Seismic Hazard map, most of the site is mapped as older Quaternary alluvial and fan deposits, consisting mainly of sand, silt, clay, and gravel. In addition, an isolated area that is underlain by Pleistocene to Holocene nonmarine terrace deposits is present near I-110 and John S. Gibson Boulevard. These nonmarine terrace deposits consist of calcareous sands, shell fragments, and scattered gravels and cobbles. Manmade fill materials are also reported to be present east of I-110 and south of C Street. Based on barrier location and site physiography, shallow groundwater is expected to be within a zone of 0 to 5 feet (or 3 to 8 feet MLLW), generally flowing southerly but subject to minor tidal fluctuations near the water's edge.

No active, potentially active, or major inactive faults cross the project site. The major controlling Holocene fault for the project site is the Palos Verdes fault, located about 0.7 mile from the site. The alternate San Pedro fault is present at about 0.1 mile from the inferred branch and about 0.4 mile from the construction area. Neither the alternate nor the inferred traces have been located in this area, though the evidence of the fault is very strong.

Environmental Consequences

Potential Direct and/or Indirect Impacts within RSA: The proposed project would not result in an adverse impact on geology, soils, seismicity, or topography. The proposed project would not involve substantial cut-and-fill work, nor would it change drainage patterns or create temporary slopes that would expose people or structures to the risk of loss, injury, or death. The project would be designed per Caltrans seismic design criteria and other applicable guidelines.

Current and Reasonably Foreseeable Projects within RSA: All related projects would be required by law to comply with the Uniform Building Code and local regulations. Therefore, it is expected that related projects would be constructed to the applicable Uniform Building Code and would not expose people or structures to an increased risk of loss, injury, or death.

Cumulative Impact Potential: As a result of compliance with building and structural codes, the proposed project and related projects would not result in an adverse impact related to geology, soils, seismicity, or topography and would not contribute to any cumulative impacts in these areas.

Avoidance, Minimization, and/or Mitigation Measures

No adverse cumulative impacts involving geology, soils, seismicity, and/or topography are anticipated as a result of the project, and no avoidance, minimization, and/or mitigation measures are proposed.

2.4.10 Paleontology

Affected Environment

Resource Study Area: The RSA for paleontology is the area encompassing a number of identified fossil sites in upland geological deposits, roughly falling within a 0.5-mile radius of the project site (shown in Figure 2-15a).

Existing Conditions within RSA: The central and southern portions of the project area contain a Late Pleistocene geological formation that is considered to have high sensitivity for paleontological resources due to the presence of a diverse array of vertebrate fossils that were encountered previously within that deposit. This area of potential sensitivity is located at the western end of Harry Bridges Boulevard and C Street between Figueroa Street and I-110. However, no field survey of the project site was conducted because the site is covered by extensive development and artificial fill.

Environmental Consequences

Potential Direct and/or Indirect Impacts within RSA: Excavation into undisturbed geologic deposits underlying the project area, which include Quaternary alluvium, older Quaternary alluvium, and Miocene-age marine deposits of Malaga Mudstone, could affect fossil resources. However, implementation of mitigation measure PAL-1 would ensure that no substantial adverse effects would occur.

Current and Reasonably Foreseeable Projects within RSA: Although other projects proposed within the RSA may have the potential to affect paleontological resources, it is expected that they would undergo environmental review and also follow local regulations to minimize effects on paleontological resources.

Cumulative Impact Potential: Construction activities associated with the proposed project could contribute to a progressive loss of paleontological resources and result in an adverse cumulative impact. However, implementation of measure PAL-1 would ensure that any cumulative impacts, if they should occur, would be minimized. Other projects within a 0.5-mile radius would implement similar mitigation measures to minimize impacts on paleontological resources.

Avoidance, Minimization, and/or Mitigation Measures

Substantial adverse cumulative impacts on paleontological resources would not occur. Furthermore, measure PAL-1 would minimize the potential for impacts on paleontological resources.

2.4.11 Hazardous Waste/Materials

Affected Environment

Resource Study Area: The RSA for hazardous waste and materials is the "subject property" area, as defined in the ISA and Phase II study prepared for the project. The subject property includes parcels that may require partial or full right-of-way acquisitions and some that may require temporary construction easements in addition to the right-of-way within the project extents.

Existing Conditions within RSA: Numerous sites were found in the environmental information database that lie within the project's 1-mile radius, and six sites are located within the project site. In addition to the sites from the database, an oil refinery is located on the west side of the subject property alignment adjacent to southbound I-110. Three sites located outside of the subject property's improvement area were identified in the LUST and Cortese database search. Leaking underground storage tanks at or near the site and releases from the nearby refinery have likely affected groundwater conditions in the area of the proposed improvements. Due to the age of the I-110 facility, lead-containing materials, aerially deposited lead, and other heavy metals may occur within the RSA. There is the potential for deeper subsurface soils at some locations to have been affected by petroleum hydrocarbons.

Environmental Consequences

Potential Direct and/or Indirect Impacts within RSA: With implementation of a soil mitigation plan, an aerially deposited lead survey, and an inspection of properties to be acquired per Department of Toxic Substances Control requirements, any potential impacts would be minimized.

Current and Reasonably Foreseeable Projects within RSA: The nearest related project is the planned Harry Bridges Boulevard buffer area, which is part of the TraPac project, which abuts the project site. The related projects listed in Table 2-1 would adhere to their specific migration measures to minimize adverse effects from exposure to hazardous materials. Thus, the potential for related projects to create hazards or discharge hazardous wastes within the subject area is low, and cumulative impacts would not occur.

Cumulative Impact Potential: The project would comply with all applicable local and Caltrans regulations related to hazardous wastes. Prior to the start of construction, all necessary investigations would be conducted, and remediation would be undertaken if contaminated soil or material is found. Consequently, cumulative impacts are not anticipated.

Avoidance, Minimization, and/or Mitigation Measures

The proposed project would not result in an adverse impact related to hazardous waste or materials, and cumulative impacts are not anticipated.

2.4.12 Air Quality

Affected Environment

Resource Study Area: The proposed project is located in the South Coast Air Basin (Basin). The Basin is the appropriate RSA for evaluating cumulative impacts at a regional level (shown in Figure 2-15b). For localized construction effects, an area within a 1,000-foot radius of the project site is considered the RSA (shown in Figure 2-15a).

Existing Conditions within RSA: The proposed project alignment is located in an area with relatively poor air quality due to its location downwind of the densely urbanized City and County of Los Angeles and because meteorological conditions in the project vicinity contribute to air quality problems. The State of California has designated the southeastern portion of the Basin as being a nonattainment area for ozone, particulate matter smaller than or equal to 2.5 microns in diameter (PM2.5), and particulate matter smaller than or equal to 10 microns in diameter (PM10). The federal EPA has designated this area as being a nonattainment area (extreme) for ozone (8-hour standard) and a nonattainment area (serious) for PM10.

Environmental Consequences

Potential Direct and/or Indirect Impacts within RSA: During construction, the proposed project would be subject to SCAQMD Rule 403 (Fugitive Dust), which requires best available fugitive dust control measures to be incorporated into construction practices. Construction impacts of the proposed project were found to be less than significant. In addition, exhaust emissions from diesel-powered construction equipment were found to pose a less-than-significant health risk. The proposed project would not result in adverse operational emissions impacts when compared with the future no-build conditions. Rather, implmetnation of the proposed project would reduce pollution levels and result in a regional air quality benefit.

Current and Reasonably Foreseeable Projects within RSA: The only project within 1,000 feet of the project site is the Harry Bridges Boulevard buffer area component of the TraPac project. However, the construction activities for the buffer area have been completed prior to construction of the proposed project. With respect to the construction- and operations-period air quality emissions from projects within the Basin, SCAQMD has developed strategies to reduce criteria pollutant emissions, as outlined in the AQMP, pursuant to federal Clean Air Act mandates. As such, the projects within the basin, including all the related projects, would comply with SCAQMD Rule 403 requirements, among other SCAQMD requirements. In addition, the projects would comply with adopted AQMP emissions control measures. Per SCAQMD rules and mandates as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, compliance with LAHD's *Sustainable Construction Guidelines*, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects Basin-wide, which would include each of the related projects mentioned in Table 2-1.

Cumulative Impact Potential: Since none of the related projects within the 1,000-foot buffer of the project site would be constructed at the same time as the proposed project, there would be no localized cumulative construction impacts. Additionally, for region-wide emissions, SCAQMD strategies and compliance with SCAQMD rules would mitigate the cumulative air quality impacts of the proposed project and other related projects and development in the Basin. The proposed project would not result in substantially adverse cumulative air quality impacts.

Avoidance, Minimization, and/or Mitigation Measures

Adverse cumulative impacts affecting local or regional air quality are not anticipated, and no additional avoidance, minimization, and/or mitigation measures are proposed.

2.4.13 Noise

Affected Environment

Resource Study Area: The RSA for noise is defined as the project area of the *Noise Study Report*, which includes surrounding properties along the alignment that may be affected by noise during construction and operation of the project (shown in Figure 2-13).

Existing Conditions within RSA: The modeled noise levels were found to range from 61 dBA L_{eq}(h) to 64 dBA L_{eq}(h) for residential land uses and users of green space in the buffer area. Noise-sensitive uses are located on the east side of Figueroa Street, between West C Street and West D Street. The area flat, with I-110 elevated above the local terrain; however, a warehouse blocks direct line of sight between I-110 and the residences. Front porches, walkways, and side yards face the roadway. North of the residences, at the corner of Figueroa Street and West D

Street, a day care center exists, with a recreation area facing the two streets. Primary access to the day care center is from Figueroa Street. These uses were taken into account when selecting receptor locations for noise modeling.

Environmental Consequences

Potential Direct and/or Indirect Impacts within RSA: The proposed project would not result in significant noise impacts or adverse effects. Construction would be conducted in accordance with Caltrans' Standard Specifications, Section 7-1.01I, and applicable local noise standards.

Current and Reasonably Foreseeable Projects within RSA: The *Noise Study Report* took into account future traffic growth due to related growth and development, including the related projects in Table 2-1 and calculated future noise conditions. The *Noise Study Report* did not identify adverse noise impacts under the future build conditions.

Cumulative Impact Potential: Noise levels under the future build condition would result in an increase beyond existing noise levels, but this increase would be less than 12 dB and would not be substantially adverse. The increased noise levels under the future with-project conditions when compared with the future no-project conditions would be minimal for the identified sensitive receptors. Construction activities for the proposed project and related projects would be carried out in accordance with municipal codes and Caltrans guidelines, where applicable, thereby ensuring that noise impacts from construction activities would not be significant. Thus, there would not be a substantially adverse or significant cumulative impact.

Avoidance, Minimization, and/or Mitigation Measures

No adverse cumulative impacts involving noise are anticipated, and no avoidance, minimization, and/or mitigation measures are proposed.

2.4.14 Biological Environment

Affected Environment

Resource Study Area: .The RSA for plant and wildlife resources is defined as the BSA identified for the proposed project. The BSA for the proposed project includes the proposed construction limits plus a 500-foot buffer. The RSA was confined to this area due to the low quality of the biological resources that would be disturbed by the proposed project and their lack of contribution to the health and viability of other resources in the region. Also, project impacts associated with biological resources would be localized .The RSA is shown in Figure 2-14.

A delineation for jurisdictional waters and wetlands was not performed for this project because no natural water features occur within the limits of disturbance.

Existing Conditions within RSA: The BSA is predominately developed with patches of ornamental or ruderal vegetation; there is no potential for a wildlife corridor or linkage to be present. No jurisdictional drainage water features are present within the limits of disturbance. No sensitive natural vegetation communities were observed within BSA, and no special-status species were observed during the site visit. There are a number of trees within the BSA, with the majority being invasive species (such as Tasmanian blue gum [*Eucalyptus globulus*] and Mexican fan palm [*Washingtonia robusta*]). The listed species with potential to occur within the BSA as forager species are California brown pelican, American peregrine falcon, and California least tern. The remaining species have no potential to occur because there is no suitable habitat present. The BSA supports habitat suitable for nesting birds protected by the federal Migratory Bird Treaty Act and California Fish and Game Code.

Environmental Consequences

Potential Direct and/or Indirect Impacts within RSA: Areas that would be affected support very sparse, primarily nonnative vegetation; therefore, the proposed project would not result in permanent impacts on any native vegetation community or affect any wildlife resources. Because a portion of the West Basin is found within the BSA, runoff from vehicular traffic may have an indirect impact on EFH areas. However, given that the limit of disturbance is separated from the West Basin by an active industrial area and roadways, any potential impacts would be minimal. Construction activities for the proposed project would result in the removal of trees (native and nonnative) protected under City of Los Angeles tree policies and ordinances. Of the listed species that could forage within the BSA, foraging activity would occur primarily outside of the project footprint, within the harbor portion of the BSA. Thus, no direct impacts on listed animals would occur. With implementation of the avoidance measure, the project would not result in direct impacts on nesting birds or trees protected under a City of Los Angeles ordinance. Direct impacts related to runoff would also not occur.

Current and Reasonably Foreseeable Projects within RSA: The related projects are located generally in an area of low biological quality. With respect to impacts on waters of the United States, it is expected that related projects would comply with the pertinent regulations and avoid, minimize, or mitigate impacts at a watershed level. Similarly, the related projects would implement mitigation measures to minimize impacts on non-listed birds protected under the federal MBTA and similar state statutes.

Cumulative Impact Potential: The potential for cumulative impacts on biological resources is low due to the urbanized and degraded nature of the resources. The proposed project would not directly or indirectly affect plant and wildlife resources, waters of the United States, or state jurisdictional waters/streambeds. With the implementation of mitigation measures, no adverse effects on trees, nesting birds, or surface water runoff would occur from the proposed project. Therefore, the proposed project would not contribute to a cumulatively considerable impact.

Avoidance, Minimization, and/or Mitigation Measures

No cumulative impacts on biological resources are anticipated, and no avoidance, minimization, and/or mitigation measures are proposed.

2.5 Climate Change (CEQA)

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gases (GHGs), particularly those generated from the production and use of fossil fuels.

2.5.1 Regulatory Setting

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization's in 1988, has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs related to human activity that include carbon dioxide (CO_2), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (1, 1, 1, 2–tetrafluoroethane), and HFC-152a (difluoroethane).

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas (GHG) Mitigation" is a term for reducing GHG emissions in order to reduce or "mitigate" the impacts of climate change. "Adaptation," refers to the effort of planning for and adapting to impacts due to climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).

Transportation sources (passenger cars, light duty trucks, other trucks, buses and motorcycles) in the state of California make up the largest source (second to electricity generation) of greenhouse gas emitting sources. Conversely, the main source of GHG emissions in the United States is electricity generation followed by transportation. The dominant GHG emitted is CO_2, mostly from fossil fuel combustion.

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improve system and operation efficiencies, 2) reduce growth of vehicle miles traveled (VMT) 3) transition to lower GHG fuels and 4) improve vehicle technologies. To be most effective all four should be pursued collectively. The following regulatory setting section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources

State

With the passage of several pieces of legislation including State Senate and Assembly Bills and Executive Orders, California launched an innovative and pro-active approach to dealing with greenhouse gas emissions and climate change at the state level.

Assembly Bill 1493 (AB 1493), Pavley. Vehicular Emissions: Greenhouse Gases (AB 1493), 2002: requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year. In June 2009, the U.S. Environmental Protection Agency (U.S. EPA) Administrator granted a Clean Air Act waiver of preemption to California. This waiver allowed California to implement its own GHG emission standards for motor vehicles beginning with model year 2009. California agencies will be working with Federal agencies to conduct joint rulemaking to reduce GHG emissions for passenger cars model years 2017-2025.

Executive Order S-3-05: (signed on June 1, 2005, by Governor Arnold Schwarzenegger) the goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

AB32 (AB 32), the Global Warming Solutions Act of 2006: AB 32 sets the same overall GHG emissions reduction goals as outlined in Executive Order S-3-05, while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the State's Climate Action Team.

Executive Order S-01-07: Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this Executive Order, the carbon intensity of California's transportation fuels is to be reduced by at least ten percent by 2020.

Senate Bill 97 (Chapter 185, 2007): required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the State CEQA Guidelines for addressing greenhouse gas emissions. The Amendments became effective on March 18, 2010.

Fe*d*eral

Although climate change and GHG reduction is a concern at the federal level; currently there are, no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level greenhouse gas analysis. As stated on FHWA's climate change website (http://www.fhwa.dot.gov/hep/climate/index.htm), climate change considerations should be integrated throughout the transportation decision-making process–from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the State has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and reduction in the growth of vehicle hours travelled.

Climate change and its associated effects are also being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the "National Clean Car Program" and Executive Order 13514- Federal Leadership in Environmental, Energy and Economic Performance.

Executive Order 13514 is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also direct federal agencies to participate in the interagency Climate Change Adaptation Task Force, which is engaged in developing a U.S. strategy for adaptation to climate change.

On April 2, 2007, in Massachusetts v. EPA, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- *Endangerment Finding:* The Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6)--in the atmosphere threaten the public health and welfare of current and future generations.
- *Cause or Contribute Finding:* The Administrator found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles, which was published on September 15, 2009[32]. On May 7, 2010 the final Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a memorandum on May 21, 2010[33].

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[32] http://www.epa.gov/climatechange/endangerment.html
[33] http://epa.gov/otaq/climate/regulations.htm

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon (MPG) if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On January 24, 2011, the U.S. EPA along with the U.S. Department of Transportation and the State of California announced a single timeframe for proposing fuel economy and greenhouse gas standards for model years 2017-2025 cars and light-trucks. Proposing the new standards in the same timeframe (September 1, 2011) signals continued collaboration that could lead to an extension of the current National Clean Car Program.

Caltrans and its parent agency, the Business, Transportation, and Housing Agency (BT&H), have taken an active role in addressing GHG emissions and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human-made GHG emissions are from transportation, Caltrans has created and is implementing its Climate Action Program that was published in December 2006 (California Department of Transportation 2006a).

2.5.2 Climate Change Effects

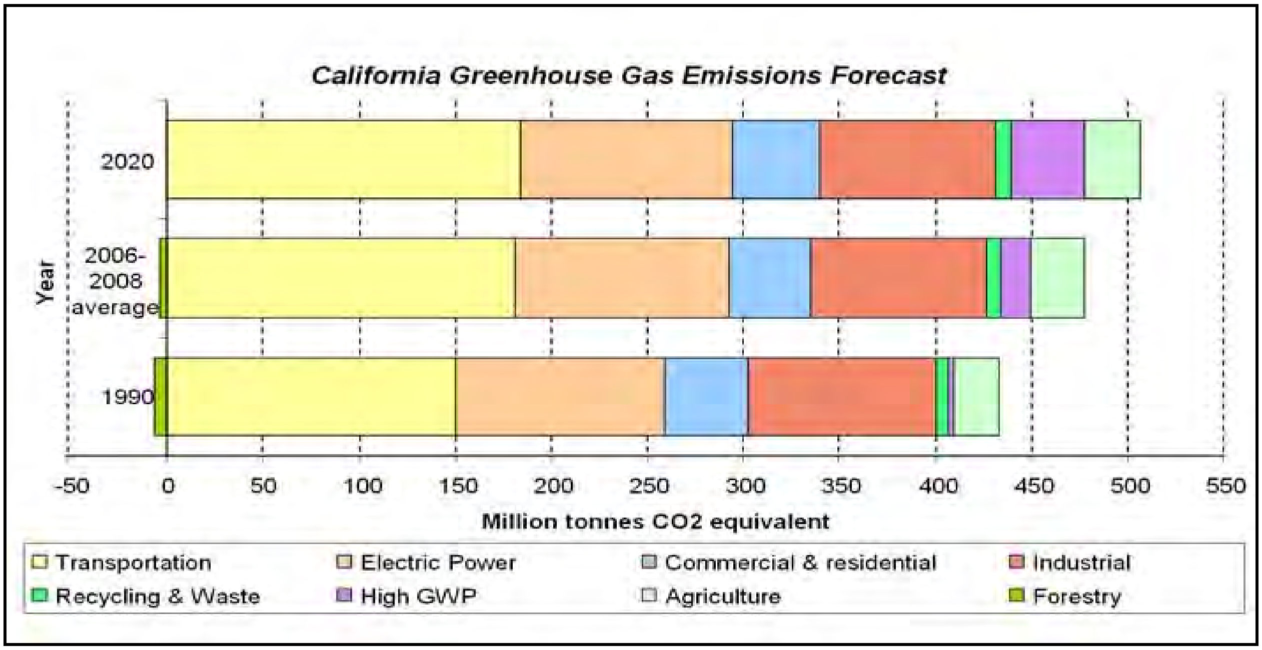
This section summarizes methodology; conclusions of the climate change analysis; potential climate change impacts that could result from implementation of the proposed project; and avoidance, minimization and/or mitigation measures to reduce these impacts.

Assessment Methodology

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (see CEQA Guidelines sections 15064(h)(1) and 15130). To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

The AB 32 Scoping Plan contains the main strategies California will use to reduce GHG. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California (Forecast last updated: 28 October 2010). The forecast, summarized in Figure 2-16, is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

Figure 2-16: California Greenhouse Gas Forecast



Source: http://www.arb.ca.gov/cc/inventory/data/forecast.htm

Construction

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events. However, LAHD, as the local sponsor and the responsible agency for the proposed project, requires a quantitative analysis for quantitative analysis of construction-related GHG emissions for all of its projects. Therefore, a quantitative construction impact analysis is provided in Appendix H3, Impact Analyses Required for LAHD as the Responsible Agency.

Operation

Because automobiles are a major source of GHG emissions and the quantity of GHG emissions from automobiles correlates directly with VMT, the quantification of CO_2 emissions was made using Caltrans' CT-EMFAC emissions model, which was described previously, and traffic data provided by the project traffic engineers, Iteris (Iteris 2011). Likewise, GHG emissions from medium- and heavy-duty idling were calculated using EMFAC 2007. EMFAC2007 estimates only CO_2 and CH_4 emissions. N_2O emissions were therefore calculated using the ratio of diesel fuel consumed per kilogram of CO_2 emitted, as reported by the Climate Action Registry (2011). Gallons of diesel fuel consumed were converted to N_2O emissions, assuming 0.082 gram of N_2O is emitted per liter of diesel (based on the default factor for uncontrolled trucks in the Canadian vehicle fleet [U.S. estimates unavailable]). Please refer to Appendix D, Operational Emissions Analysis Data, for the calculations used to estimate operational GHG emissions. Operational GHG emissions are analyzed below.

Operational Greenhouse Gas Emissions Analysis

Daily emissions of CO_2 associated with implementation of the proposed project were calculated using CT-EMFAC and EMFAC. Table 2-58 summarizes the estimated operational GHG emissions anticipated to result from the proposed project.

Table 2-58: Estimated Operational GHG Emissions (metric tons/year)

Scenario	Daily VMT	CO_2	CH_4[a]	N_2O[a]	CO_2e
2008 No Build	21,217	3,636.835	0.001	0.000	3,637.017
2008 Build	20,807	3,572.150	0.003	0.001	3,572.485
2014 No Build	27,230	5,252.741	0.024	0.009	5,256.185
2014 Build	25,152	4,621.888	0.005	0.002	4,622.574
2035 No Build	34,756	6,855.015	0.029	0.013	6,859.775
2035 Build	32,528	6,080.912	0.005	0.002	6,081.792
Alternative Differences					
2008 Build - 2008 No Build	-410	-65	0.001	0.000	-65
2014 Build - 2014 No Build	-2,078	-630.853	-0.019	-0.008	-633.611
2035 Build - 2035 No Build	-2,228	-774.104	-0.023	-0.011	-777.983
[a] Current emissions models do not include emission factors for CH4 and N2O from running exhaust and evaporative loss. Emissions presented in the table are a result of medium and heavy-duty truck idling only.					
2008	20,807	3,572.150	0.003	0.001	3,572.485
2014 No Build	27,230	5,252.741	0.024	0.009	5,256.185
2014 Build	25,152	4,621.888	0.005	0.002	4,622.574
2035 No Build	34,756	6,855.015	0.029	0.013	6,859.775
2035 Build	32,528	6,080.912	0.005	0.002	6,081.792
Alternative Differences					
2014 Build – 2014 No Build	-2,078	-630.853	-0.019	-0.008	-633.611
2035 Build – 2035 No Build	-2,228	-774.104	-0.023	-0.011	-777.983
[a] Current emissions models do not include emissions factors for CH_4 and N_2O from running exhaust and evaporative loss. Emissions presented in the table are a result of medium- and heavy-duty truck idling only.					

As shown in Table 2-58, implementation of the proposed project is anticipated to result in a reduction of CO_2e emissions. Reductions are attributable to reduced vehicle delay and congestion at study area intersections as well as overall reductions in regional VMT. Please refer to Chapter 1 for additional details on project improvements.

2.5.3 Minimization Measures

Implementation of the measures outlined below would minimize climate change effects from construction and operation of the proposed project.

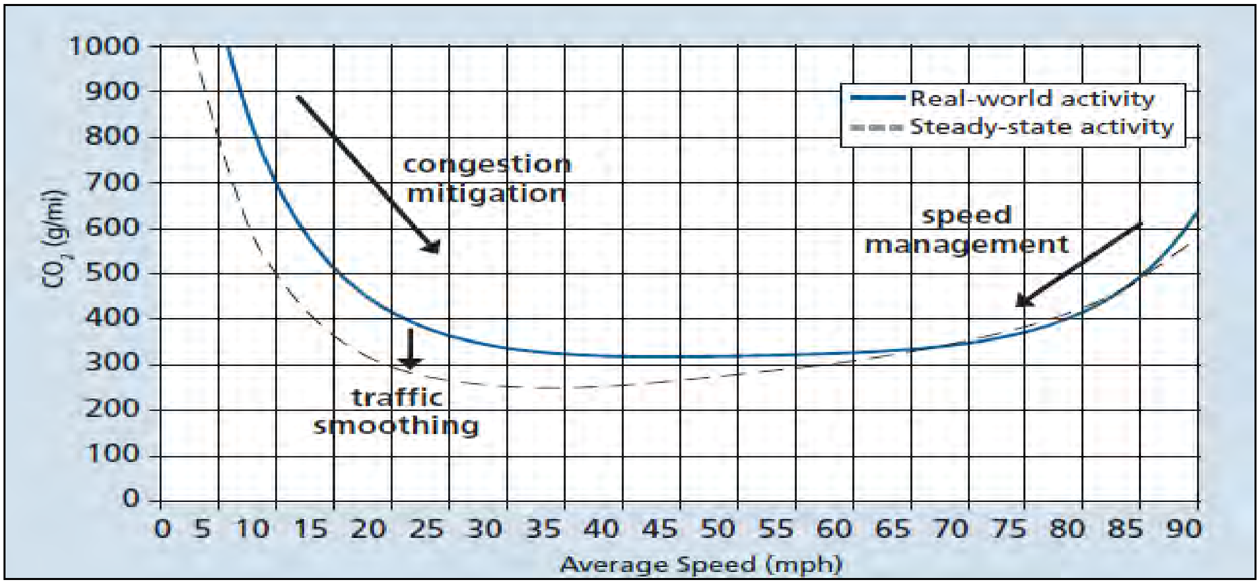
Construction

The frequency and occurrence of construction-related GHG emissions can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. In addition, with innovations such as pavement with a longer life, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

Operation

One of the main strategies in Caltrans' Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of CO_2 from mobile sources, such as automobiles, occur at stop-and-go speeds (0–25 mph) and speeds over 55 mph; the most severe emissions occur between 0 and 25 mph (see Figure 2-17). To the extent that a project relieves congestion by enhancing operations and improving travel times in high-congestion travel corridors, GHG emissions, particularly CO_2, may be reduced. As indicated in Table 2-44 in Section 2.6.2, Air Quality, the proposed project would reduce average delay at project intersections as well as overall regional VMT. These project benefits are expected to result in a reduction in CO_2e emissions.

Figure 2-17: Fleet CO_2 Emissions vs. Speed (Highway)



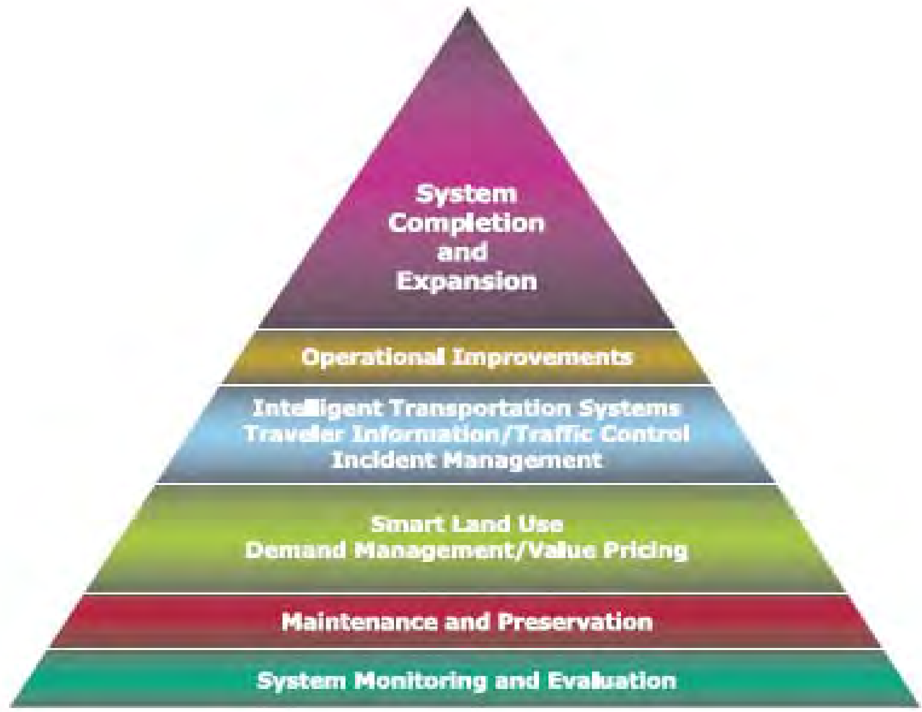
The 2008 RTP includes strategies to reduce VMT and associated per capita energy consumption from the transportation sector. It also includes mitigation measures related to energy to reduce consumption and increase the use and availability of renewable sources of energy in the region (Southern California Association of Governments 2008c). Potential mitigation measures identified in the 2008 RTP include increasing automobile efficiency and constructing the infrastructure necessary to accommodate increased use of alternative-fuel motor vehicles while coordinating transportation, land use, and air quality planning to reduce VMT, energy use, and GHG emissions (Southern California Association of Governments 2008c).

The EIR for the 2008 RTP performed a consistency analysis for the GHG emissions-reduction strategy to evaluate effects associated with the 2008 RTP related to climate change. This consistency analysis considered CARB, EPA, BT&H, Public Utilities Commission, and State and Consumer Services Agency GHG emissions-reduction strategies and found that effects related to climate change are significant, even with implementation of mitigation measures. To help mitigate effects associated with the 2008 RTP, SCAG identified measures to mitigate the effects of growing transportation energy demand (Southern California Association of Governments 2008c).

2.5.4 AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as ARB works to implement the Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Former Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a $222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including $100.7 billion in transportation funding during the next decade. The Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain CO_2 reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as depicted in Figure 2-18.

Figure 2-18: Mobility Pyramid



Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority. Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by U.S. EPA and ARB. Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at the UC Davis.

Table 2-59 summarizes statewide efforts that Caltrans is implementing in order to reduce GHG emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (California Department of Transportation 2006b).

Table 2-59: Caltrans' Climate Change Strategies

Strategy	Program	Partnership		Method/Process	Estimated CO_2 Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies and other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements and Intelligent Transportation Systems (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	0.007	2.17
Mainstream Energy and GHG into Plans and Projects	Office of Policy Analysis and Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational and Information Program	Office of Policy Analysis and Research	Interdepartmental, Cal/EPA, CARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening and Fuel Diversification	Division of Equipment	Department of General Services		Fleet replacement B20 B100	0.0045	0.0065 0.45 0.0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy conservation opportunities	0.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 0.36	3.6
Goods Movement	Office of Goods Movement	Cal/EPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.66	18.67
Source: Climate Change Report, 2006b.						

To the extent that it is applicable or feasible for the project and through coordination with the project development team, the following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project.

- Caltrans and the California Highway Patrol are working with regional agencies to implement ITS to help manage the efficiency of the existing highway system. ITS is commonly referred to as electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.

- Landscaping reduces surface warming and, through photosynthesis, decreases CO_2. The project will include planting on the intersection slopes, drainage channels, and seeding in areas adjacent to roads. A variety of different-sized plant material and scattered skyline trees of different sizes, where appropriate but not to obstruct scenic views, will be planted. Based on a formula from the Canadian Tree Foundation[34], it is anticipated that 40 planted trees will offset between 7-10 tons of CO_2 per year.
- The project will incorporate energy-efficient lighting, such as LED traffic signals. LED bulbs cost $60 to $70 apiece but last 5 to 6 years, compared with the 1-year average lifespan of the incandescent bulbs that were previously used. The LED balls themselves consume 10 percent of the electricity of traditional lights, a reduction that will reduce the project's CO_2 emissions.
- According to Caltrans' Standard Specifications, the contractor must comply with SCAQMD's rules, ordinances, and regulations pertaining to air quality. SCAQMD's idling regulations restrict idling to no more than 5 minutes at any one location.

In addition to Caltrans' standard GHG reduction measures, the transportation control measures and green construction and operational measures listed below would be included as part of the Build Alternative (Leathers pers. comm.).

Transportation Control Measures

- John S. Gibson Boulevard provides Class II bike lanes, and Figueroa Street provides Class III bike lanes. The proposed improvements would accommodate the existing bike lane classifications.

Green Construction and Operational Measures

- Use of PVC irrigation pipe with recycled content;
- Use of non-chlorinated high-density polyethylene irrigation crossover conduit;
- Use of compost and soil amendments derived from sewage sludge and green waste materials;
- Use of fiber produced from recycled pulp, such as newspaper, chipboard, cardboard;
- Use of wood mulch made from green waste and/or clean manufactured wood or natural wood;
- Use of native and drought-tolerant seeds and plant species;
- Use of irrigation controllers that include water conservation features;
- Restricted use of pesticides and implementation of pesticide reduction goals;

[34] Canadian Tree Foundation at http://www.tcf-fca.ca/publications/pdf/english_reduceco2.pdf. For rural areas the formula is: # of trees/360 x survival rate = tones of carbon/year removed for each of 80 years.

- Use of reclaimed water where feasible and available;
- Use of demolished concrete rubble for storm drain outlet scour protection where feasible; and
- Recycling of miscellaneous metals (inlet frame and grates, sign panels, fencing, etc.) when appropriate.

Adaptation Strategies

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by longer periods of intense heat, increasing storm damage from flooding and erosion, and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

At the Federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and NOAA, released its interagency report October 14, 2010 outlining recommendations to President Obama for how Federal Agency policies and programs can better prepare the United States to respond to the impacts of climate change. The Progress Report of the Interagency Climate Change Adaptation Task Force recommends that the Federal Government implement actions to expand and strengthen the Nation's capacity to better understand, prepare for, and respond to climate change.

Climate change adaption must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, Governor Schwarzenegger signed Executive Order S-13-08 which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This Executive Order set in motion several agencies and actions to address the concern of sea level rise.

The California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop. The California Climate Adaptation Strategy (Dec 2009)[35], which summarizes the best known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

[35] http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF

The strategy outline is in direct response to Executive Order S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including Environmental Protection; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

Resources Agency was also directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report by December 2010[36] to advise how California should plan for future sea level rise. The report is to include:

- relative sea level rise projections for California, Oregon and Washington taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates;
- the range of uncertainty in selected sea level rise projections;
- a synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems;
- a discussion of future research needs regarding sea level rise

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data

Until the final report from the National Academy of Sciences is released, interim guidance has been released by The Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise.

All projects that have filed a Notice of Preparation, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects as of the date of Executive Order S 13 08 may, but are not required to, consider these planning guidelines.

[36] The Sea Level Rise Assessment report is currently due to be completed in 2012 and will include information for Oregon and Washington State as well as California.

Furthermore Executive Order S-13-08 directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level affecting safety, maintenance and operational improvements of the system and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change impacts, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans will be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted in response to Executive Order S-13-08 and is mobilizing to be able to respond to the National Academy of Science report on Sea Level Rise Assessment which is due to be released in 2012.

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Chapter 3 Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings, interagency coordination meetings, scoping meetings, and coordination with resource agencies and Native American individuals and organizations. This chapter summarizes the results of the Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

3.1 Scoping Process

An open house was held on January 7, 2009, which also served as the scoping meeting for the proposed project. During the open house, updated design concepts for the project were presented to the public. Input regarding environmental issues related to the proposed project was gathered from concerned parties. Details on the open house are provided below in Section 3.3, Public Participation.

3.2 Consultation and Coordination with Public Agencies

Consultation with several public agencies, elected officials, and other concerned parties was requested in conjunction with the preparation of the project technical reports and this initial study/environmental assessment. Consultations are identified in the various technical reports and include responses from the following agencies and other concerned parties:

- USFWS;
- National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS);
- NAHC; and
- Councilwoman Janice Hahn, Los Angeles City Council, 15th District.

Correspondence pertaining to development of the proposed project is summarized in the sections that follow.

3.2.1 Biological Resources

A list of species that could occur within the BSA and are listed as threatened, endangered, or proposed under FESA was obtained from USFWS (July 9, 2009 letter from Karen Goebel, USFWS). Per Section 7 of FESA, informal consultation via telephone and email correspondence with biologists from USFWS and NMFS has been initiated by Caltrans. This has led to confident anticipation of USFWS and NMFS concurrence with findings of "Not Likely to Adversely Affect" (see *Natural Environment Study [MI]*). Section 7 consultation will be concluded prior to finalization of the document. Further consultation with appropriate regulatory agencies will be sought.

3.2.2 Cultural Resources

A letter was sent to the NAHC on January 23, 2009, requesting a review of the sacred lands file as well as a list of Native American representatives who could be contacted for information regarding sacred sites within the project area (see Attachment H of the *Archaeological Survey Report*).

According to the NAHC response dated January 26, 2009, no known sacred sites are located within the project area. The NAHC provided a list of seven local Native Americans who can be contacted for information (see Attachment C of the *Archaeological Survey Report*). This information was forwarded to Caltrans staff for review.

In addition, on January 7, 2009, a letter and map set were sent to consulting and interested parties who may have knowledge of or concerns regarding historic properties in the area. The letter requested information pertaining to historic buildings, districts, sites, objects, or archeological sites of significance and was sent to the following recipients:

- City of Los Angeles, Board of Harbor Commissioners Office;
- Councilwoman Janice Hahn;
- Filipino American National Historical Society, Los Angeles Chapter;
- Filipino Community, Harbor Area, Wilmington;
- Getty Conservation Institute;
- Historic Landmarks and Records Commission of Los Angeles County;
- Historical Society of Southern California;
- Los Angeles City Historical Society;
- Los Angeles Conservancy;
- Los Angeles Maritime Museum;
- Office of Historic Resources;
- San Pedro Bay Historical Society; and
- Wilmington Historical Society.

On February 2, 2009, Councilwoman Janice Hahn’s deputy corresponded with John Heller, an architect at ICF International, stating that Councilwoman Hahn had no objection to the project. To date, no other correspondence addressing the proposed project has been received.

3.3 Public Participation

A Notice of Initiation of Studies (NOIS) was released on September 15, 2008, to encourage participation from the public and concerned parties through public comment as well as attendance at the open house held on January 7, 2009. During the open house, Caltrans staff, with input from LAHD staff, presented updated design concepts for the proposed project. Staff members were made available to respond to any concerns or comments voiced by the public.

Approximately 82 people attended the open house, including representatives of the San Pedro Skatepark Association (SPSA), the Coalition for a Safe Environment, the Maritime Association, and local labor unions, among others. In addition, a total of nine written comments were received during the open house. Copies of the letters and comments, along with the NOIS and a copy of the sign-in sheet for the open house are provided in Appendix E. Letters/emails and/or comments were received from the following:

- Guillermo Jaimes, Communities for a Better Environment, Huntington Park, California;
- Maria Garibay, Wilmington, California;
- Robert Yamasaki, SPSA, Long Beach, California;
- Kerri Cacciata, SPSA, Long Beach, California;
- Jesse Marquez, Coalition for a Safe Environment, Wilmington, California;
- Ana Govorcin, San Pedro, California (two comments);
- Michael Richards, SPSA, Long Beach, California;
- Gregor Blackburn, CFM, Branch Chief, Floodplain Management and Insurance Branch of the Federal Emergency Management Agency (letter); and
- Charlotte Waters, President, Black Hill Neighborhood Watch Committee.

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Appendices

Appendix A CEQA Checklist

CEQA Environmental Checklist

07-LA-110	**2.5/3.0**	**264800**
Dist.-Co.-Rte.	P.M/P.M.	E.A.

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or within the body of the environmental document itself. The words "significant" and "significance," as used throughout the following checklist, are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts; they do not represent thresholds of significance.

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts on forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, and the forest carbon measurement methodology provided in the forest protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment that, because of their location or nature, could result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

IV. BIOLOGICAL RESOURCES: Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

V. CULTURAL RESOURCES: Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

VI. GEOLOGY AND SOILS: Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42)?	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismically related ground failure, including liquefaction?	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

VII. GREENHOUSE GAS EMISSIONS: Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans' determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

IX. HYDROLOGY AND WATER QUALITY: Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☒	☐
h) Place within a 100-year flood hazard area structures that would impede or redirect floodflows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Expose people or structures to inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

X. LAND USE AND PLANNING: Would the project:

a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

XI. MINERAL RESOURCES: Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

XII. NOISE: Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

XIII. POPULATION AND HOUSING: Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel, and relevant components of the circulation system, including but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable regional water quality control board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
c) Require or result in the construction of new stormwater drainage facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b) Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Appendix B Resources Evaluated Relative to the Requirements of Section 4(f)

Appendix B Resources Evaluated Relative to the Requirements of Section 4(f)

This section of the document discusses parks, recreational facilities, wildlife refuges and historic properties found within or adjacent to the project area that do not trigger Section 4(f) protection either because: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, 4) the project does not permanently use the property and does not hinder the preservation of the property, or 5) the proximity impacts do not result in constructive use.

B.1 Parks and Recreational Resources

B.1.1 Wilmington Recreation Center

The Wilmington Recreation Center is Section 4(f) protected public recreation facility located approximately 0.5 mile east of the proposed project. Under the Build Alternative, land from the 7.5 acre recreation Center would neither be permanently acquired, nor temporarily acquired through construction easement. Construction activities would be limited to the existing roadway areas and public rights-of-way and would take place at a great distance from the recreation center. Therefore, the Build Alternative would not affect the visual or noise environments, air quality, water quality, vegetation, or any wildlife at the recreation center. Additionally, pedestrian and vehicular access to the center would be maintained during construction of the proposed Build Alternative. Accordingly, the Build Alternative will not cause a constructive use of the Wilmington Recreation Center because the proximity impacts will not substantially impair the protected activities, features, or attributes of the recreation center.

B.1.2 Harry Bridges Buffer Area

The Harry Bridges Boulevard buffer area was recently constructed in 2011 in the vacant area north of Harry Bridges Boulevard. The Harry Bridges Boulevard buffer provides 30-acres of public open space between port operations and the adjacent residential areas. Construction activities and staging for the Build Alternative would occur on or near the Harry Bridges Boulevard buffer; however, the construction of the buffer area has been coordinated with the design of the proposed project. Accordingly, any changes to the existing buffer area resulting from construction or operation of the Build Alternative have been planned for and would have no adverse effects on the activities, functions or attributes of the proposed buffer area. The Build Alternative would not affect access to the buffer zone nor are any noise walls proposed. Accordingly, the Build Alternative will not cause a constructive use of the buffer area because the proximity impacts will not substantially impair the protected activities, features, or attributes of the recreational green space.

B.2 Archeological Resources

A Phase I archaeological reconnaissance survey was conducted on January 30, 2008. The archaeological survey located no surficial archaeological sites. Architectural field surveys of all properties within the proposed APE were undertaken on December 30, 2008, according to standard Caltrans guidelines and procedures. No new surficial prehistoric or historical archaeological resources were observed within the proposed project archaeological APE during the survey. Therefore, the provisions of Section 4(f) are not triggered. While construction activities associated with the Build Alternative have the potential to affect unknown buried cultural resources, if any such unanticipated resources are unearthed during construction. Avoidance or a reduction in the nature of this effect on buried or otherwise unidentified cultural resources would be achieved by implementing mitigation measures CR-1 and CR-2, which are standard practice on all Caltrans projects.

B.3 Historic Properties

Four properties were evaluated for the Historical Resources Evaluation Report (HRER) prepared for the proposed project. Five built environment properties were evaluated for the National Register of Historic Places. Of those, four properties; addresses 324, 318, 316, and 312 North Figueroa Street, were evaluated to be ineligible for either the National or the California Registers of Historic Places. Therefore, the provisions of Section 4(f) are not triggered.

The fifth, Air Raid Siren #82, located on the northwest corner of Harry Bridges Boulevard and South Figueroa Street, was found eligible as a contributing element of a geographically discontiguous historic district with roughly 165 sirens (see Historical Property Survey Report, page 4, as well as page 7-2 of the HRER). Physical changes to the parcel that contains Air Raid Siren #82 would be confined to the existing right-of-way in the vicinity of the siren and would not result in adverse effects to the siren itself; therefore, the Build Alternative will not cause a constructive use of Air Raid Siren #82 because the proximity impacts will not substantially impair the protected activities, features, or attributes of the historic air raid siren.

Appendix C Caltrans Title VI Policy

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
P.O. Box 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY 711

Flex your power!
Be energy efficient!

July 20, 2010

TITLE VI
POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, or age, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact Charles Wahnon, Manager, Title VI and Americans with Disabilities Act Program, California Department of Transportation, 1823 14th Street, MS-79, Sacramento, CA 95811. Phone: (916) 324-1353 or toll free 1-866-810-6346 (voice), TTY 711, fax (916) 324-1869, or via email: charles_wahnon@dot.ca.gov.

Cindy McKim
CINDY McKIM
Director

Appendix D Plans and Cross-Sections for the Proposed Project

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/2.9		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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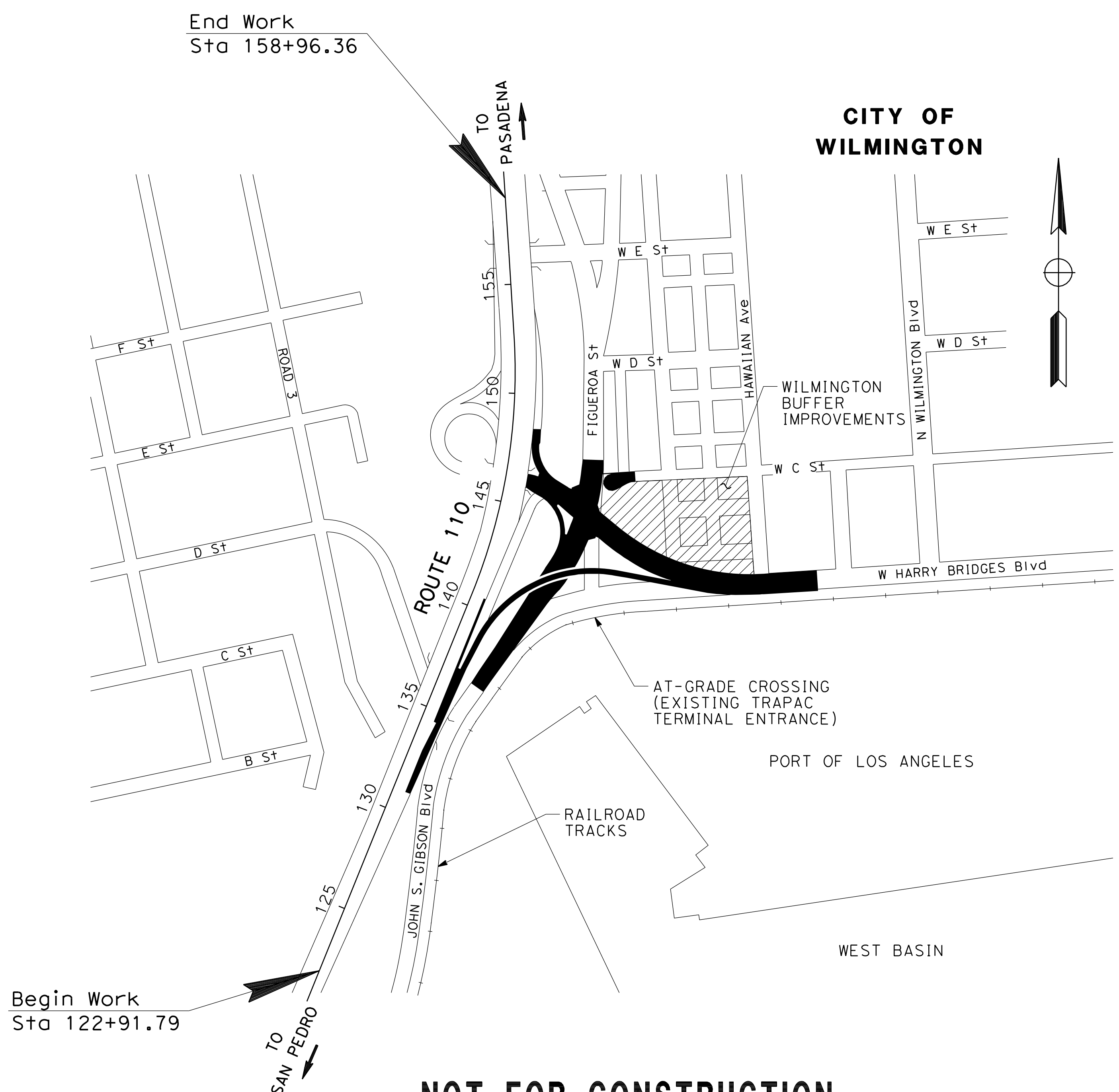
425 S. PALOS VERDES STREET
SAN PEDRO, CA 90731

HDR ENGINEERING,INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602-1377

IN LOS ANGELES COUNTY
ON ROUTE 110 BETWEEN 0.44 MILES SOUTH OF C STREET
AND 0.23 MILES NORTH OF C STREET



PROJECT LOCATION

NO SCALE

NOT FOR CONSTRUCTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: HAMID TOOSSI

CALCULATED-DESIGNED BY: R.SHAH

CHECKED BY: S.LEATHERS

REVISED BY

DATE REVISED

DATE PLOTTED => 09\18\09
TIME PLOTTED => 4:28:34 PM

LAST REVISION 00-00-00

BORDER LAST REVISED 4/11/2008

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CU 07-186

EA 264800

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/2.9		

REGISTERED CIVIL ENGINEER DATE

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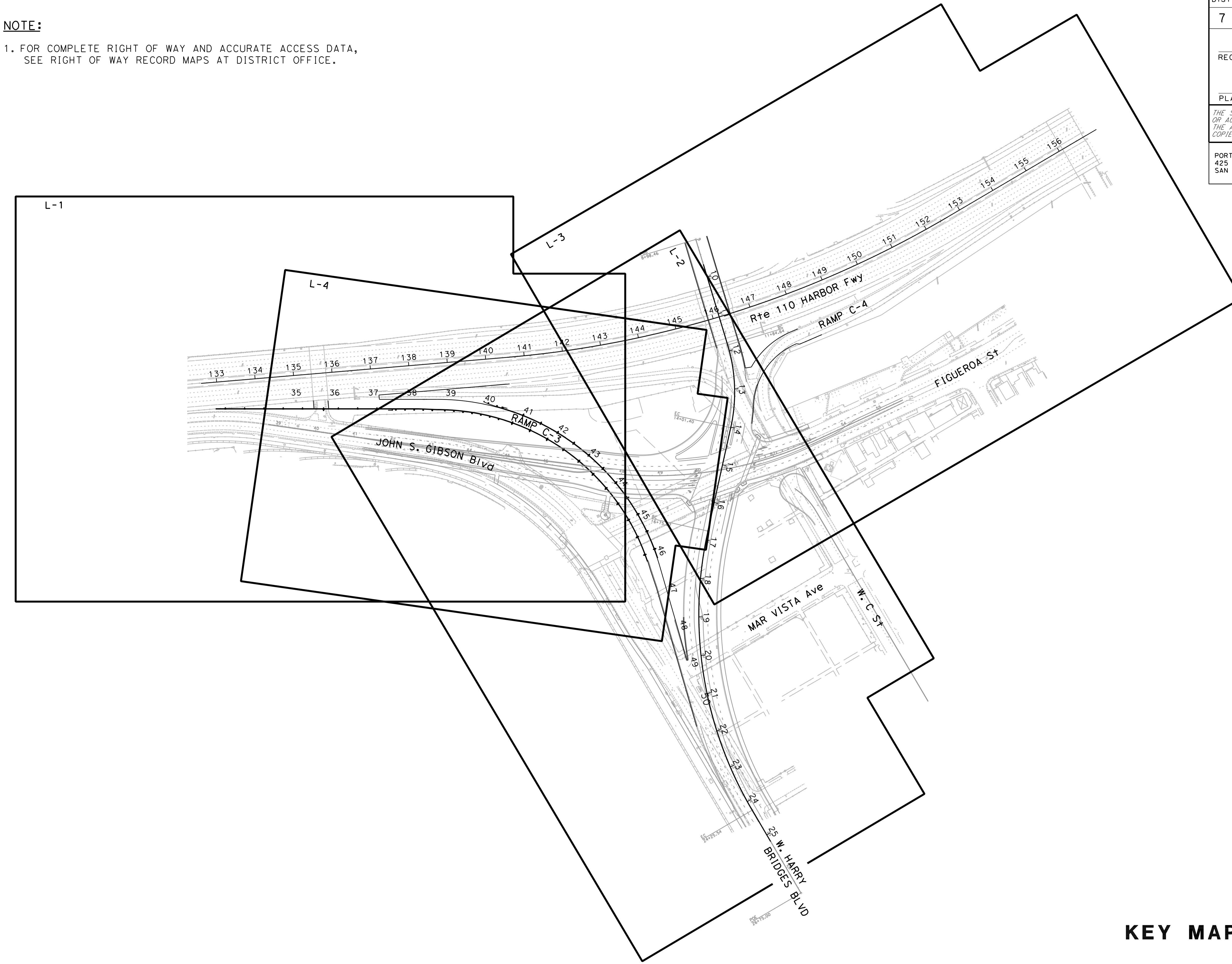
IRVINE, CA 92602-1377

NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



KEY MAP AND LINE INDEX

NO SCALE

K-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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EA 264800

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7	LA	110	2.5/2.9		

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PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER STEVEN R. LEATHERS No. C 58063 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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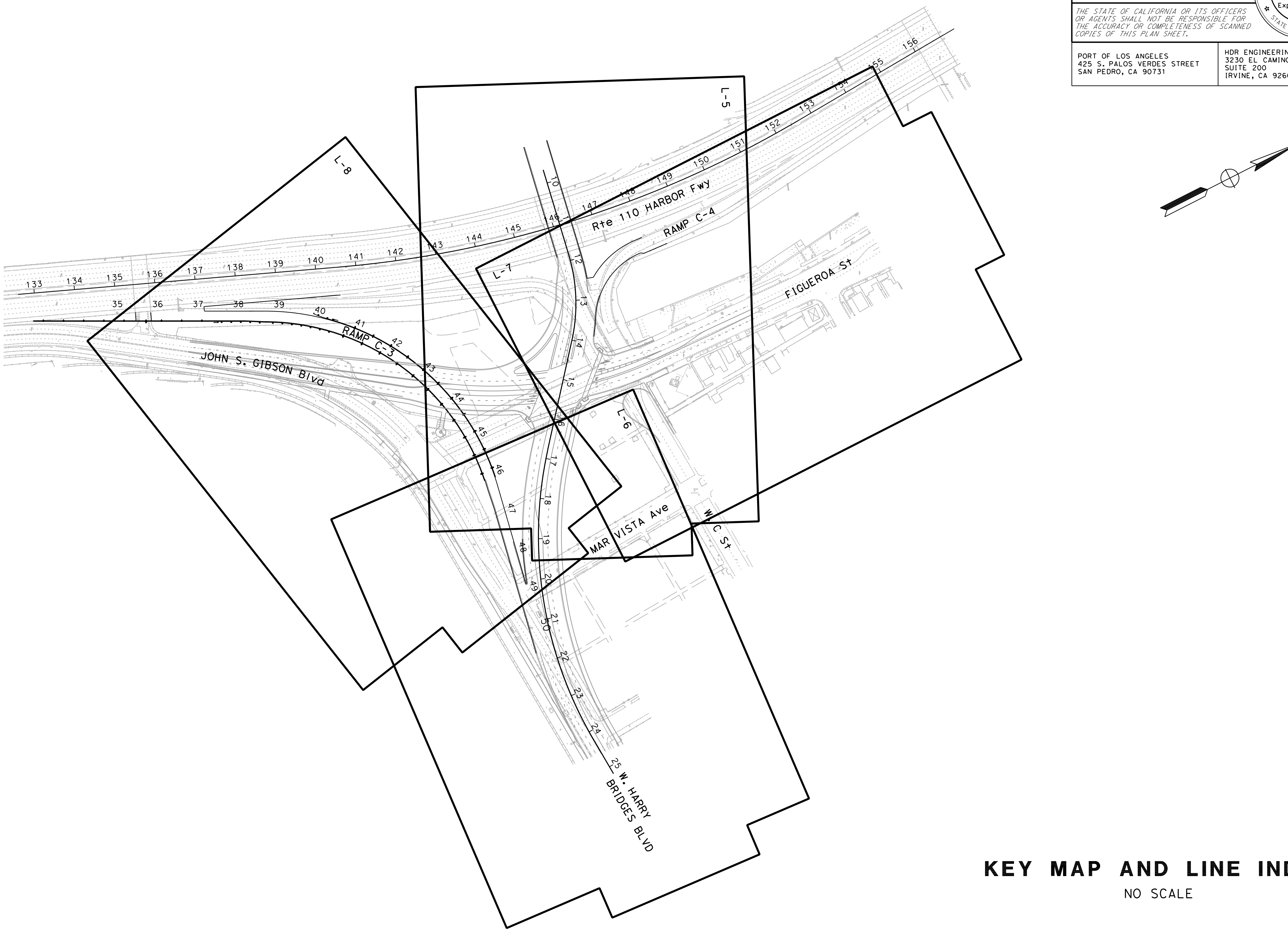

KEY MAP AND LINE INDEX

NO SCALE

K-2

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EA 264800

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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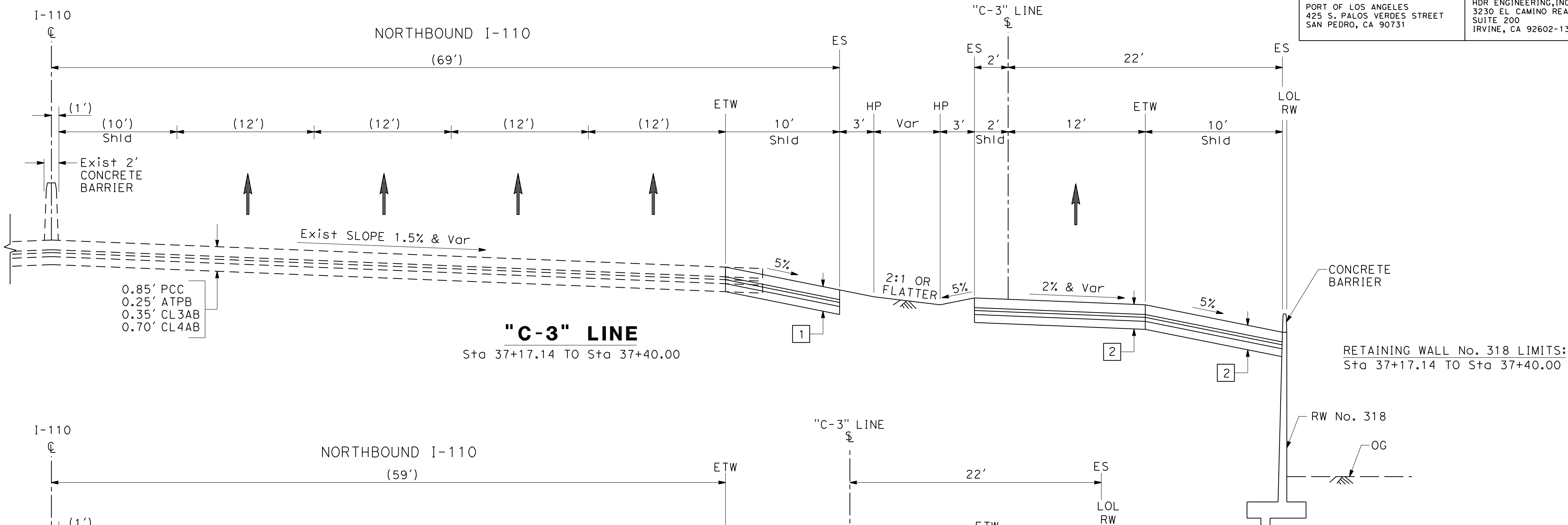
NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTION) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
3. SUPERELEVATION ARE SHOWN ON THE SUPERELEVATION DIAGRAM.
4. EXACT LOCATIONS AND TYPES OF DIKES, CURBS, GUARD RAILING, AND CONCRETE BARRIER ARE SHOWN ON THE LAYOUTS AND THE SUMMARY OF QUANTITY SHEETS.



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RETAINING WALL No. 318 LIMITS:
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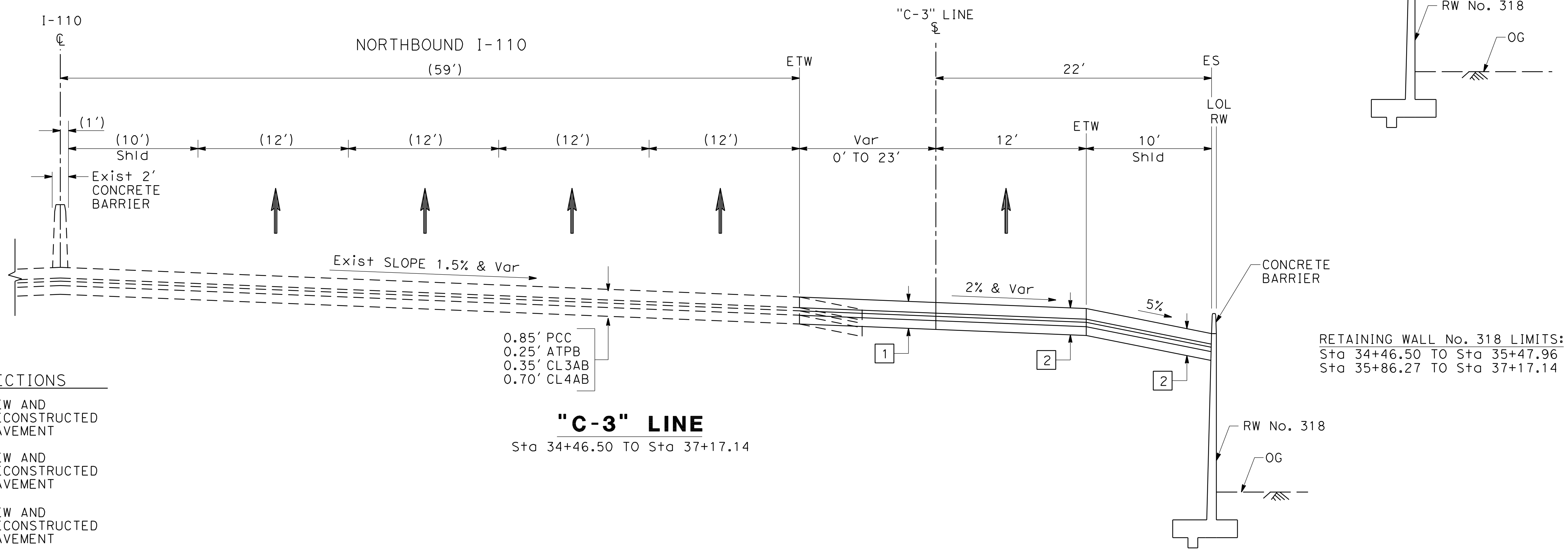

"C-3" LINE
Sta 34+46.50 TO Sta 37+17.14

RETAINING WALL No. 318 LIMITS:
Sta 34+46.50 TO Sta 35+47.96
Sta 35+86.27 TO Sta 37+17.14

LEGEND

STRUCTURAL SECTIONS

1	1.05 PCC 0.50' LCB	NEW AND RECONSTRUCTED PAVEMENT
2	0.85' PCC 0.70' AB	NEW AND RECONSTRUCTED PAVEMENT
3	0.90' PCC 0.50' LCB	NEW AND RECONSTRUCTED PAVEMENT
4	0.70' HMA 1.00' AB	NEW AND RECONSTRUCTED PAVEMENT

TYPICAL CROSS SECTIONS

NO SCALE

X-1

NOT FOR CONSTRUCTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: HAMID TOOSSI

CALCULATED-DESIGNED BY: R.SHAH
CHECKED BY: S.LEATHERS

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CU 07-186

EA 264800

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REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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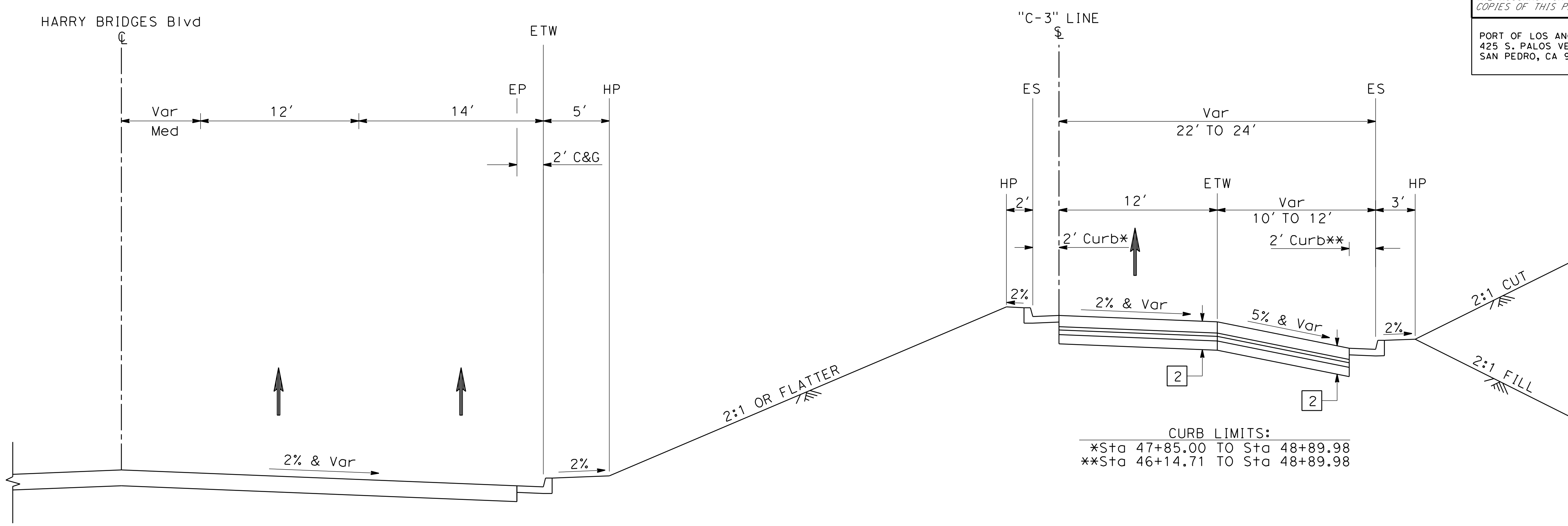

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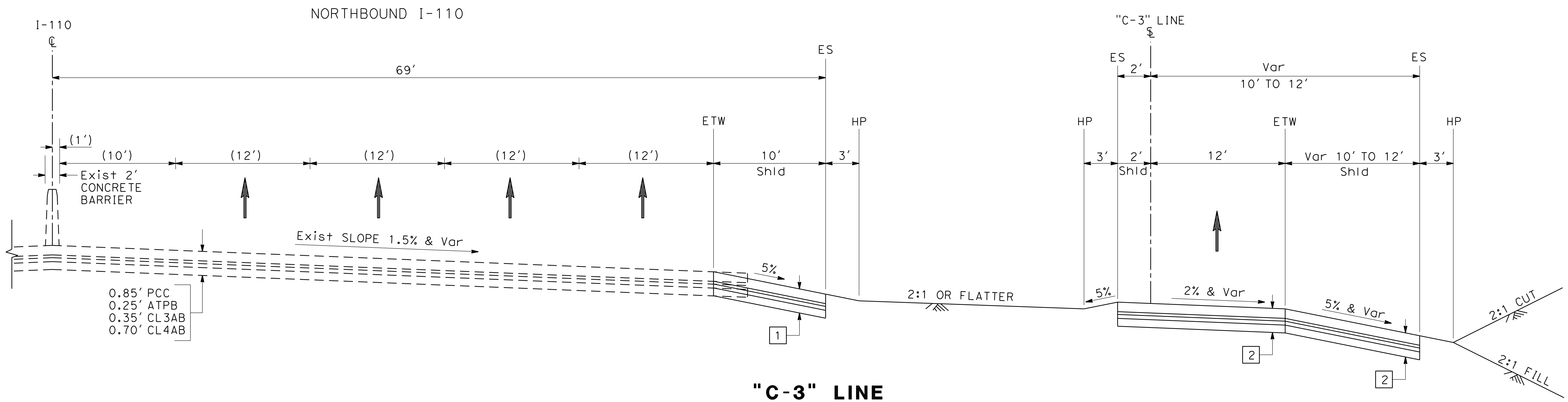

"C-3" LINE
Sta 37+40.00 TO Sta 40+79.71

TYPICAL CROSS SECTIONS
NO SCALE

X-2

NOT FOR CONSTRUCTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR HAMID TOOSSI
CALCULATED-DESIGNED BY R.SHAH
CHECKED BY S.LEATHERS
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 09\18\09
TIME PLOTTED => 4:28:55 PM

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CU 07-186
EA 264800

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/2.9		

REGISTERED CIVIL ENGINEER DATE

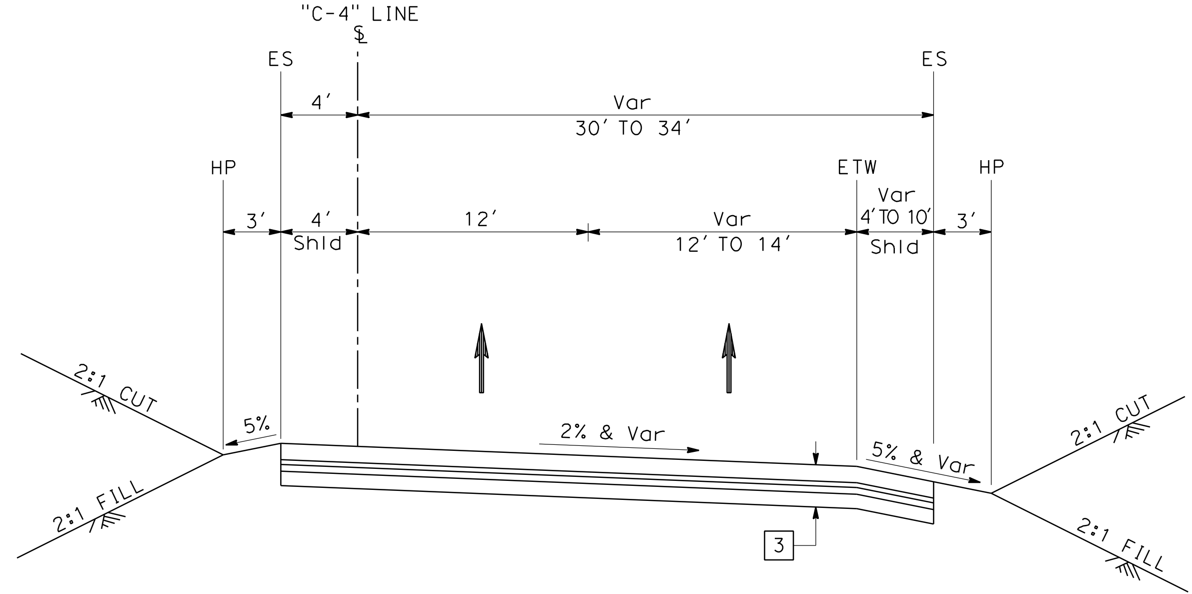
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER STEVEN R. LEATHERS No. C 58063 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

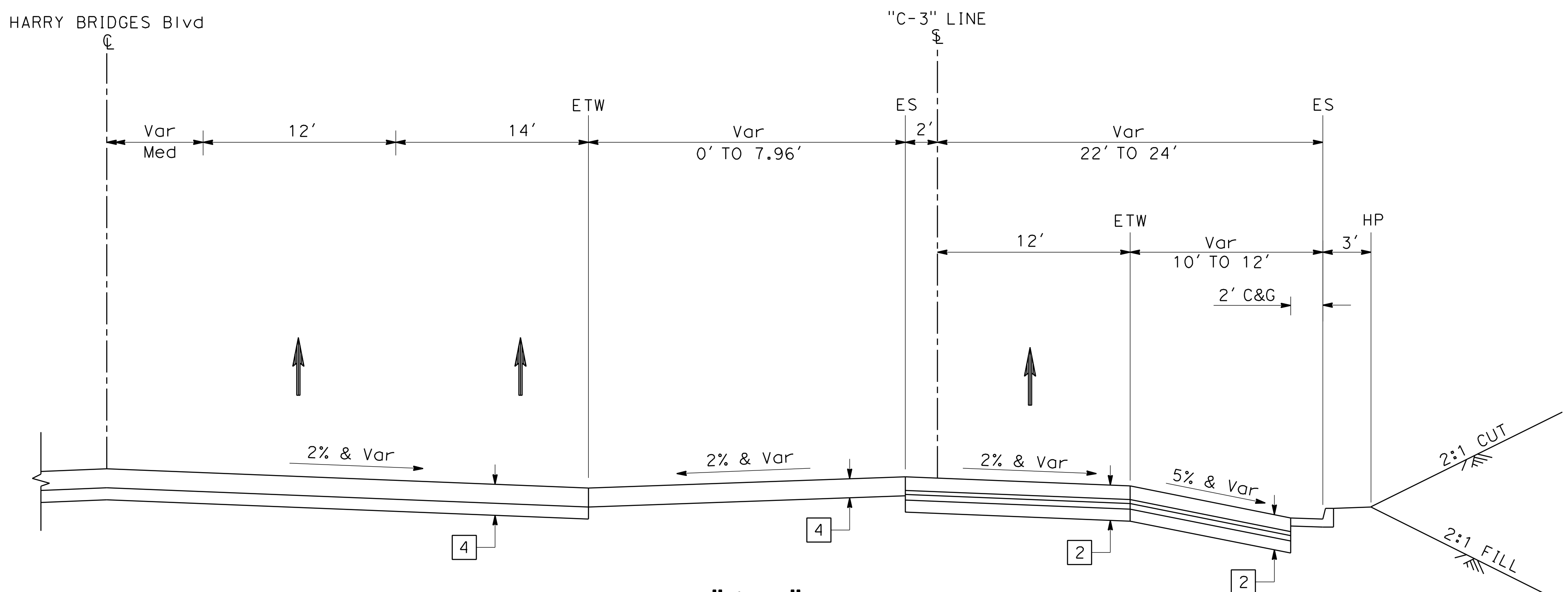
PORT OF LOS ANGELES
425 S. PALOS VERDES STREET
SAN PEDRO, CA 90731

HDR ENGINEERING,INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602-1377



"C-4" LINE

Sta 46+26.95 TO Sta 47+80.23



"C-3" LINE

Sta 48+89.98 TO Sta 50+64.14

TYPICAL CROSS SECTIONS

NO SCALE

X-3

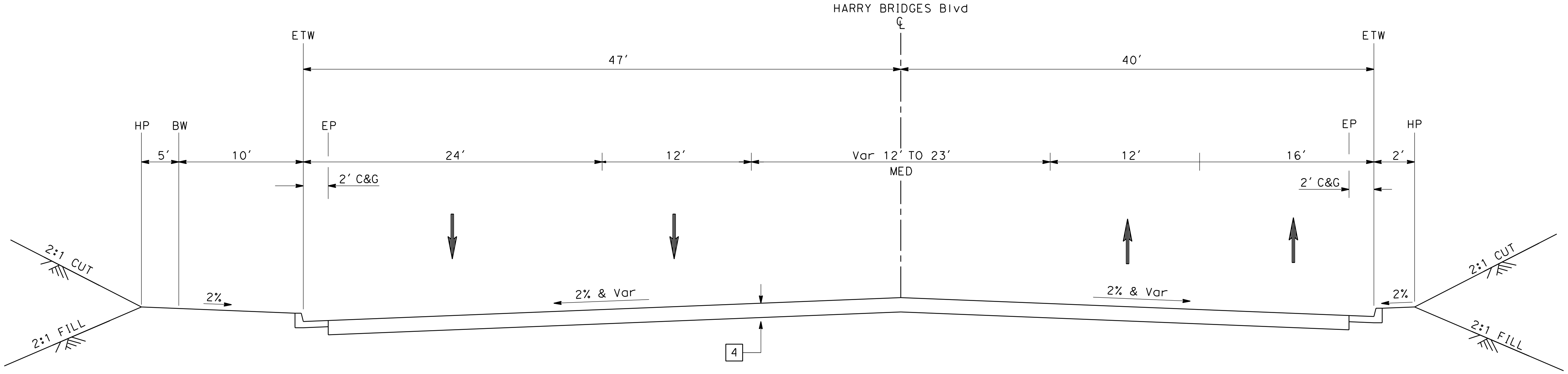
NOT FOR CONSTRUCTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: HAMID TOOSSI

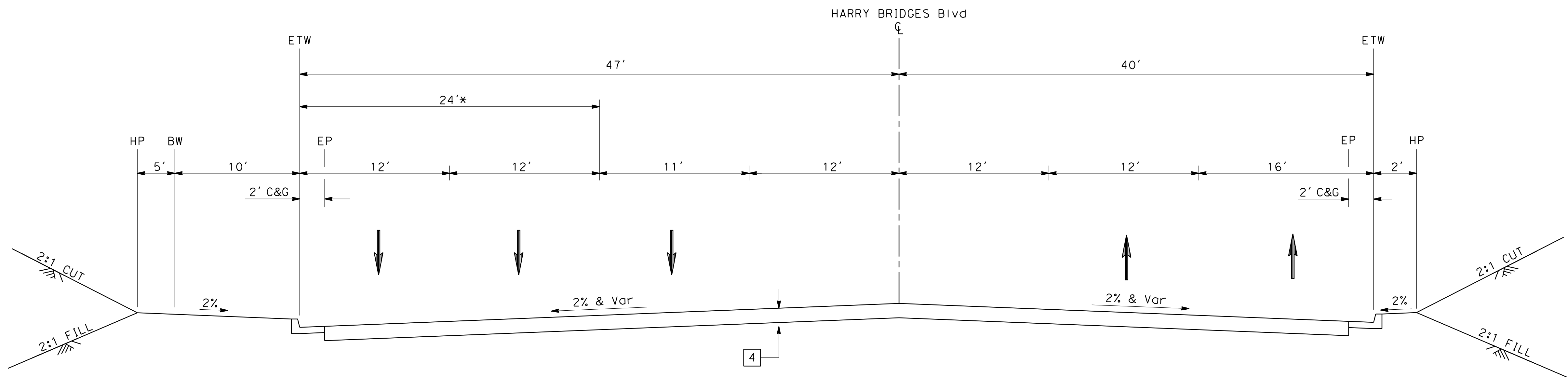
CALCULATED-DESIGNED BY: R.SHAH
CHECKED BY: S.LEATHERS
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 09\18\09
TIME PLOTTED => 4:28:59 PM



HARRY BRIDGES Blvd

Sta 19+18.50 TO 20+06.47



HARRY BRIDGES Blvd

*Sta 16+56.22 TO Sta 16+75.67
Sta 16+75.67 TO Sta 17+98.50

TYPICAL CROSS SECTION

NO SCALE

NOT FOR CONSTRUCTION

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REVISION DATES (DESIGN STAGE ONLY)

Sheet Version 2.01

THE PORT OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309

LA DPW ENGINEERING Serving the Present : Designing the Future

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

NO. | REVISIONS: | DATE: | BY:

WORK ACCEPTED | SERIAL NO.

B - PERMITS BD/BC

INDEX NO.

BUREAU OF ENGINEERING APPROVAL:
OFFICE:
CHECKED BY:
SIGNATURE:
DATE:

ENGINEER:
LIC. NO.
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

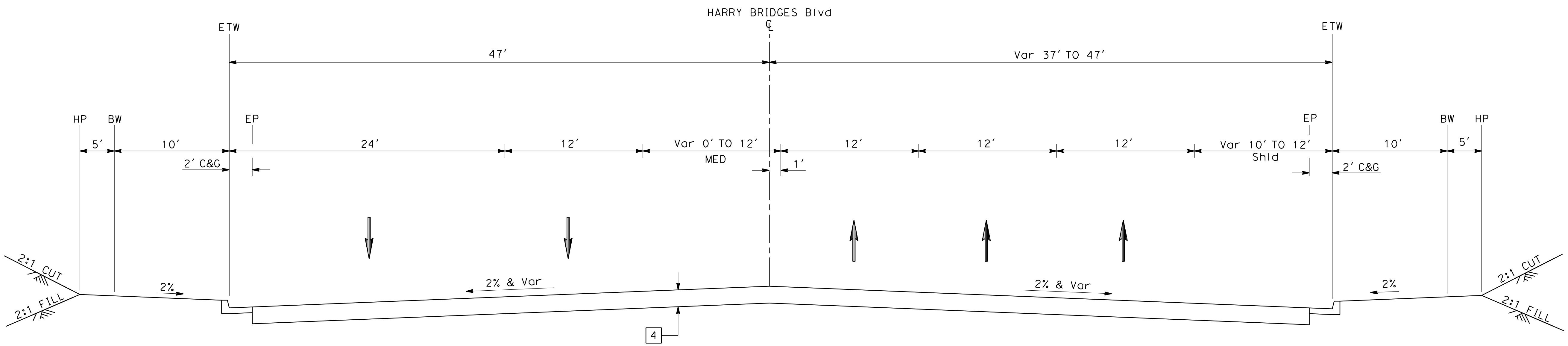
REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

PLANS PREPARED BY:
HDR | ONE COMPANY *Many Solutions*
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602

VERTICAL CONTROL:
HORIZONTAL CONTROL:

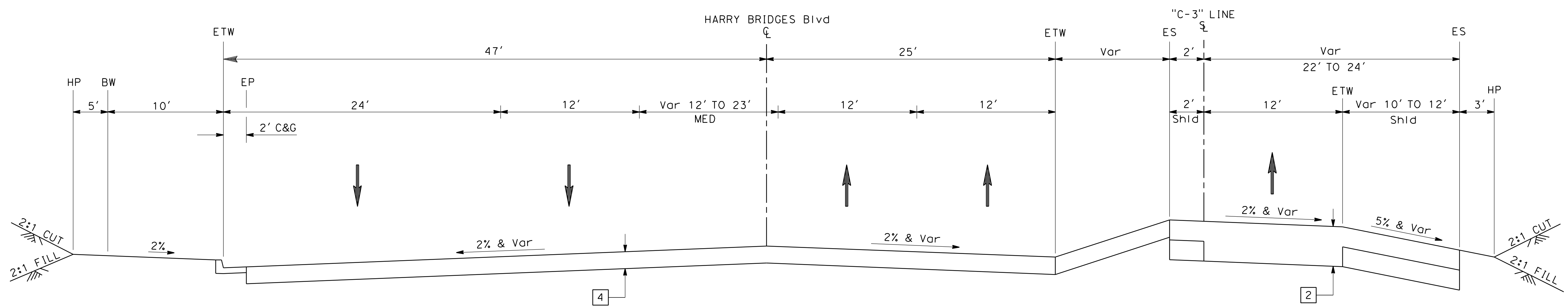
SHEET TITLE:
PROJECT:
ADDRESS:

PROJECT NO.
DRAWING NO.
X-4
SHEET OF



HARRY BRIDGES Blvd

Sta 21+75.30 TO Sta 26+75.00



HARRY BRIDGES Blvd

Sta 20+06.47 TO Sta 21+75.30

TYPICAL CROSS SECTION

NO SCALE

NOT FOR CONSTRUCTION

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REVISION DATES (DESIGN STAGE ONLY)

Sheet Version 2.01

THE PORT OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309

LA DPW ENGINEERING Serving the Present ; Designing the Future

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

NO. | REVISIONS: | DATE: | BY:

SERIAL NO. | WORK ACCEPTED

B - PERMITS
BD/BC

INDEX NO.

BUREAU OF ENGINEERING APPROVAL:
OFFICE:
CHECKED BY:
SIGNATURE:
DATE:

DATE:
LIC. NO.
ENGINEER:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

PLANS PREPARED BY:
HDR | ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200 92602
IRVINE, CA

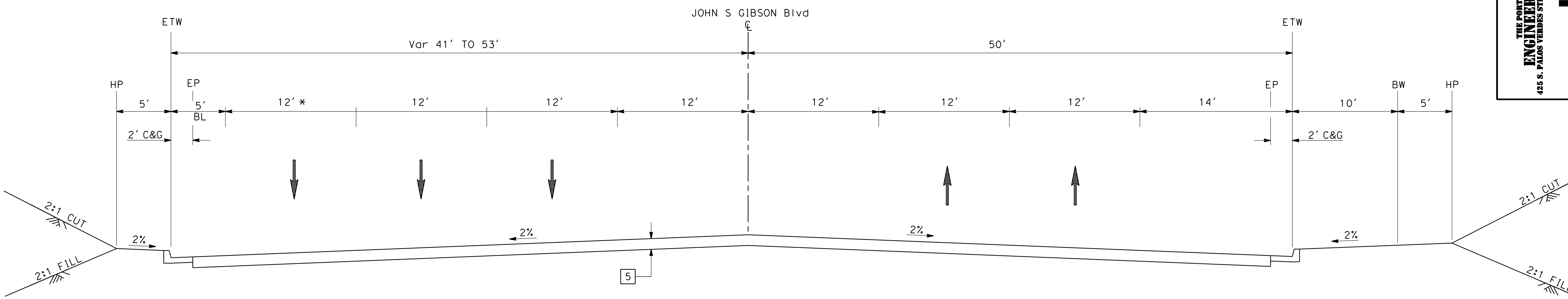
VERTICAL CONTROL:
HORIZONTAL CONTROL:

SHEET TITLE:
PROJECT:
ADDRESS:

PROJECT NO.
DRAWING NO.

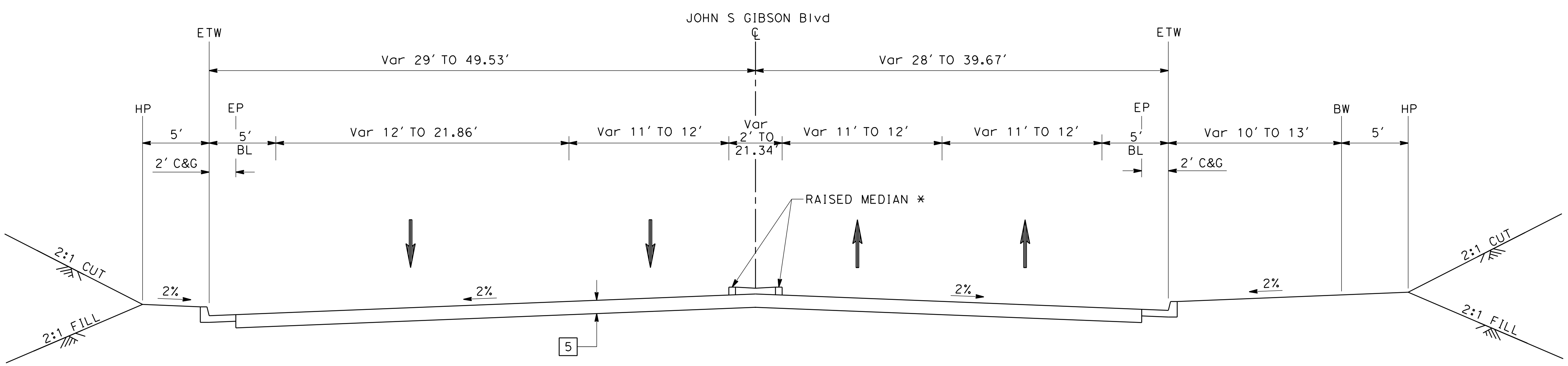
X-5

SHEET OF



JOHN S. GIBSON Blvd

* Sta 47+88.82 TO Sta 48+44.34
Sta 48+44.34 TO Sta 49+31.14



JOHN S. GIBSON Blvd

Sta 41+26.12 TO Sta 41+82.29
* Sta 41+82.29 TO Sta 46+68.82

TYPICAL CROSS SECTION

NO SCALE

NOT FOR CONSTRUCTION

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REVISION DATES (DESIGN STAGE ONLY)

Sheet Version 2.01

THE PORT OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309

LA DPW ENGINEERING Serving the Present · Designing the Future

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

NO. REVISIONS: DATE: BY:

WORK ACCEPTED
SERIAL NO.
B - PERMITS BD/BC
INDEX NO.

BUREAU OF ENGINEERING APPROVAL:
OFFICE:
CHECKED BY:
SIGNATURE:
DATE:

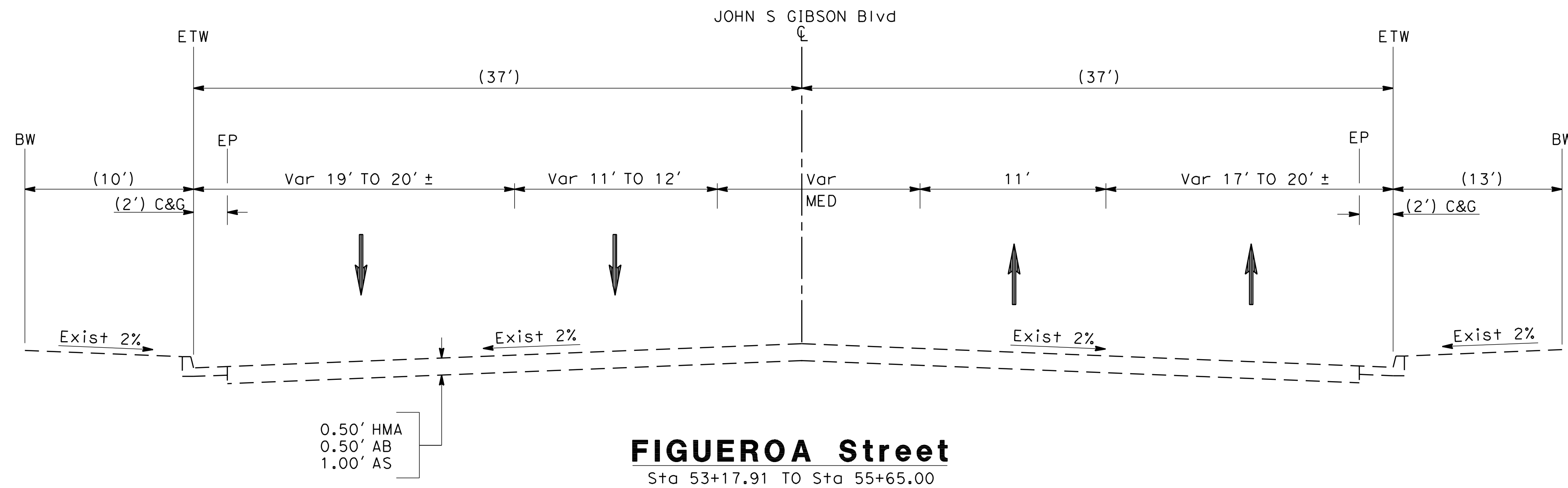
DATE:
LIC. NO.
ENGINEER:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

PLANS PREPARED BY:
HDR | ONE COMPANY *Many Solutions*
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602

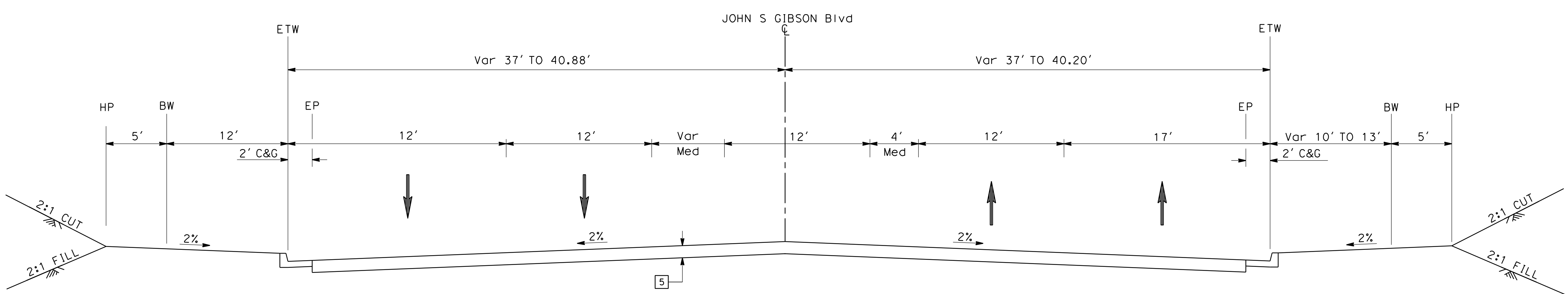
VERTICAL CONTROL:
HORIZONTAL CONTROL:
SHEET TITLE:
PROJECT:
ADDRESS:

PROJECT NO.
DRAWING NO.
X-6
SHEET OF



FIGUEROA Street

Sta 53+17.91 TO Sta 55+65.00



FIGUEROA Street

Sta 52+08.23 TO Sta 53+17.91

TYPICAL CROSS SECTION

NO SCALE

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REVISION DATES (DESIGN STAGE ONLY)

Sheet Version 2.01

THE PORT OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309

LA DPW ENGINEERING

BUREAU OF ENGINEERING

DEPARTMENT OF PUBLIC WORKS

CITY OF LOS ANGELES

NO. REVISIONS: DATE: BY:

WORK ACCEPTED SERIAL NO.

B - PERMITS BD/BC

INDEX NO.

BUREAU OF ENGINEERING APPROVAL:
OFFICE:
CHECKED BY:
SIGNATURE: DATE:

DATE:
LIC. NO.
ENGINEER:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

PLANS PREPARED BY:
HDR | ONE COMPANY *Many Solutions*
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200 92602
IRVINE, CA

VERTICAL CONTROL:
HORIZONTAL CONTROL:

SHEET TITLE:
PROJECT:
ADDRESS:

PROJECT NO.
DRAWING NO.
X-7
SHEET OF

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/2.9		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

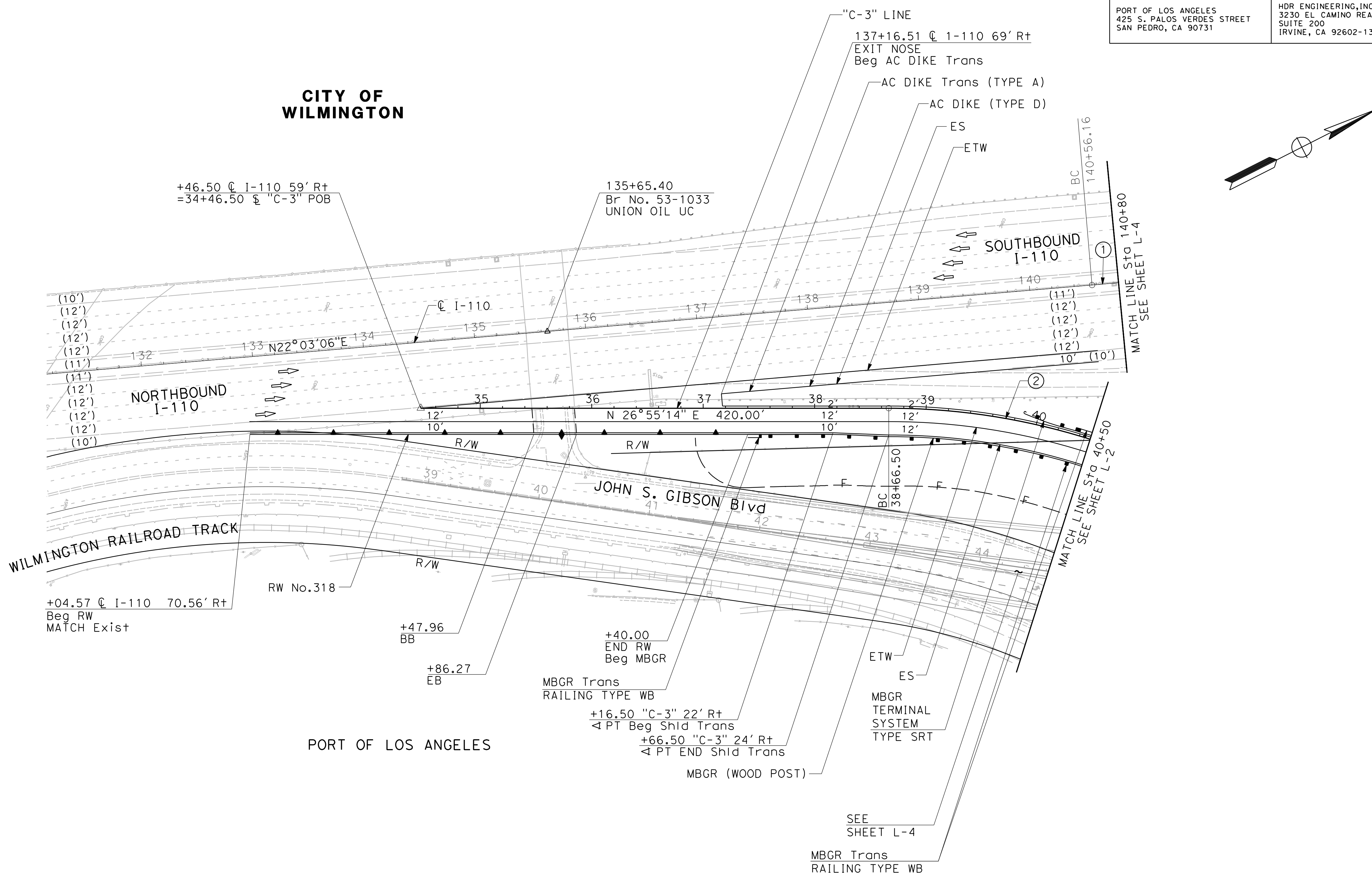
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

PORT OF LOS ANGELES
425 S. PALOS VERDES STREET
SAN PEDRO, CA 90731

HDR ENGINEERING,INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602-1377

NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



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2	600.00'	73°50'44"	450.87'	773.31'

LAYOUT

SCALE: 1" = 50'

L-1

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY R.SHAH | CHECKED BY S.LEATHERS

CONSULTANT FUNCTIONAL SUPERVISOR HAMID TOOSSI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DATE PLOTTED => 09\18\09
TIME PLOTTED => 4:29:21 PM
LAST REVISION 00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/2.9		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER STEVEN R. LEATHERS No. C 58063 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

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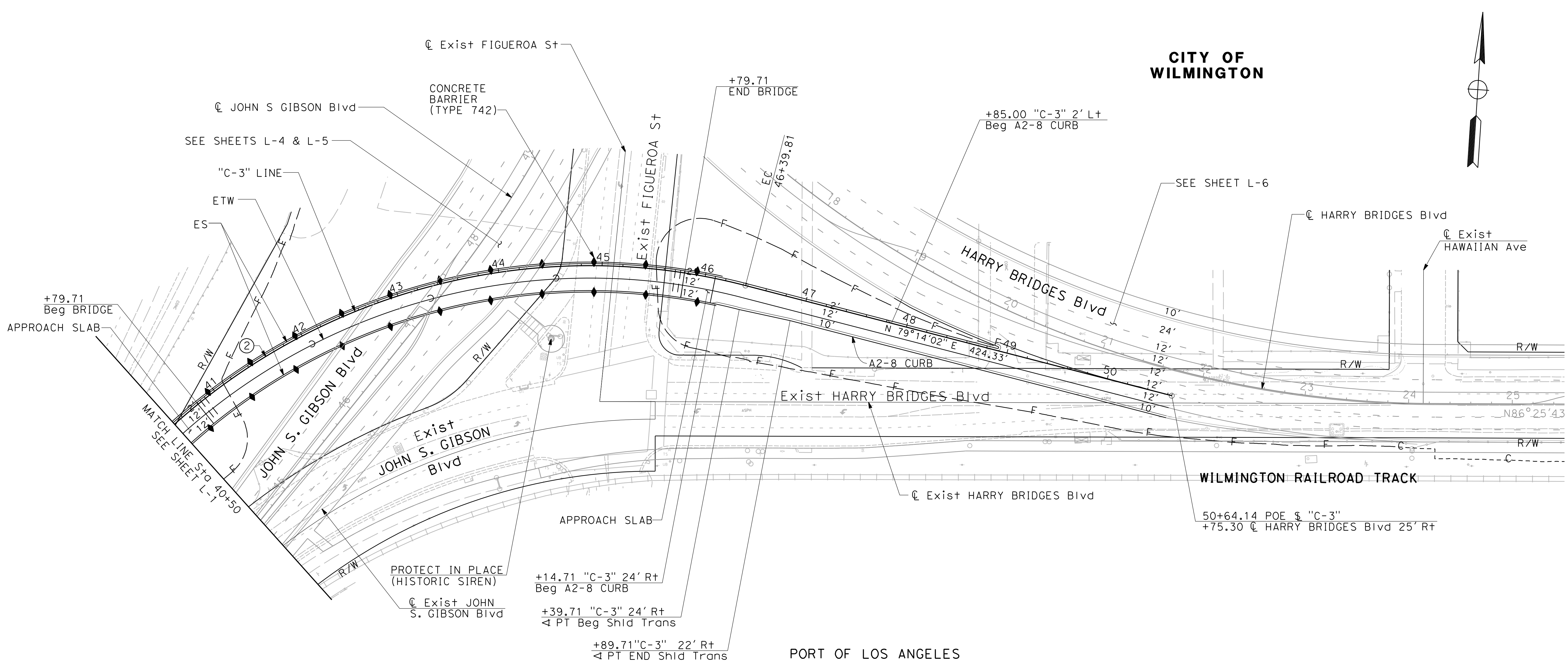
PORT OF LOS ANGELES
425 S. PALOS VERDES STREET
SAN PEDRO, CA 90731

HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602-1377

NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



CURVE DATA				
NO.	R	△	T	L
2	600'	73°50'44"	450.37'	773.31'

LAYOUT

SCALE: 1" = 50'

L-2

REVISED BY: R.SHAH | DATE REVISED: S.LEATHERS

CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: HAMID TOOSSI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 09\18\09 | TIME PLOTTED => 4:29:27 PM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/2.9		

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER STEVEN R. LEATHERS No. C 58063 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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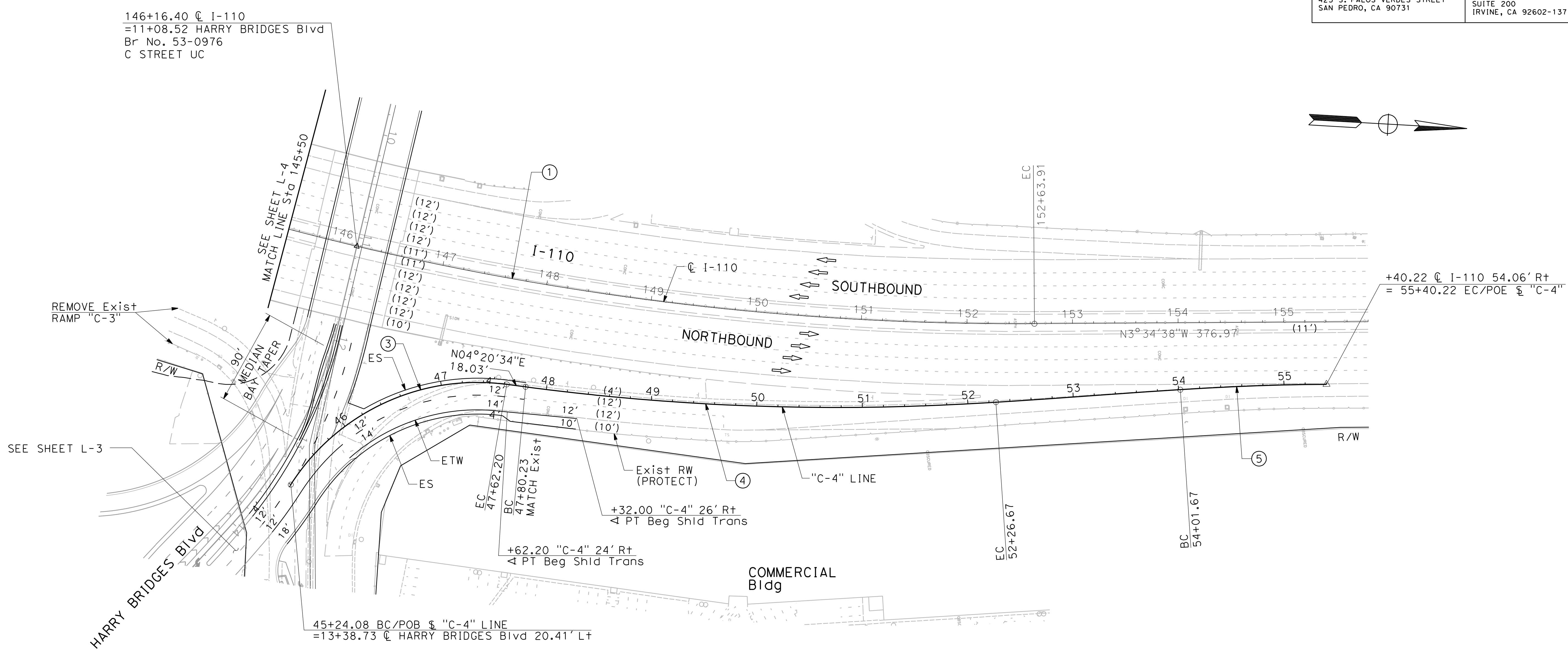
PORT OF LOS ANGELES
425 S. PALOS VERDES STREET
SAN PEDRO, CA 90731

HDR ENGINEERING,INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602-1377

NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



CITY OF WILMINGTON

CURVE DATA				
NO.	R	△	T	L
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4	2238.00'	11°25'46"	223.96'	446.44'
5	2262.00'	03°30'34"	69.30'	138.55'

LAYOUT

SCALE: 1" = 50'

L-3

REVISED BY R.SHAH | DATE REVISED S.LEATHERS

CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR HAMID TOOSSI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 DATE PLOTTED => 09\18\09 TIME PLOTTED => 4:29:33 PM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/2.9		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER STEVEN R. LEATHERS No. C 58063 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

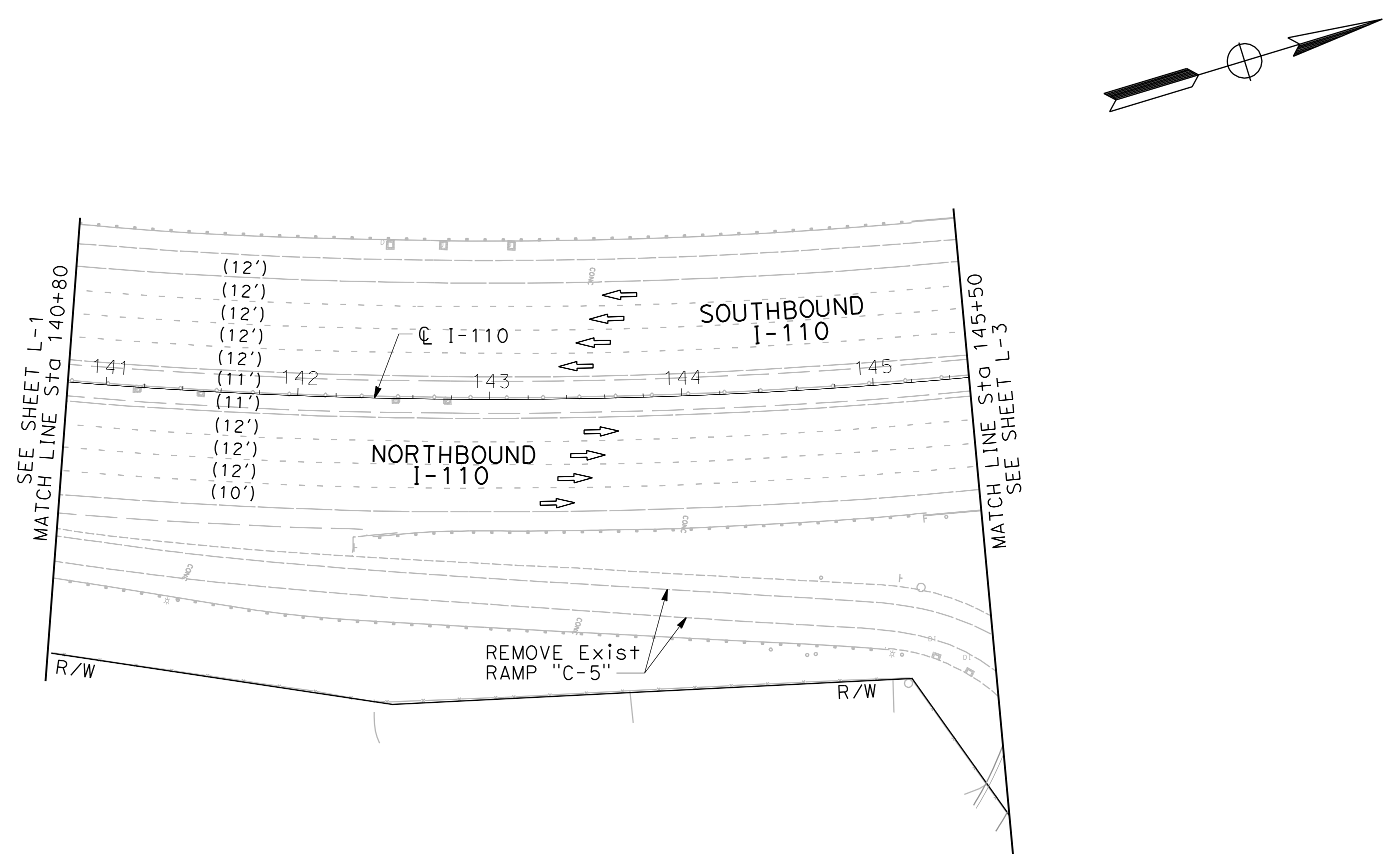
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

PORT OF LOS ANGELES
425 S. PALOS VERDES STREET
SAN PEDRO, CA 90731

HDR ENGINEERING,INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602-1377

NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



CITY OF WILMINGTON

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR	HAMID TOOSSI
CALCULATED-DESIGNED BY	R.SHAH
CHECKED BY	S.LEATHERS
REVISED BY	
DATE REVISED	

LAYOUT

SCALE: 1" = 50'

L-4

LAST REVISION 00-00-00
DATE PLOTTED => 09\18\09
TIME PLOTTED => 4:29:38 PM

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

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DGN FILE => ...\SAC\d0113384\726480ea04.dgn

CU 07-186

EA 264800

NOTE:

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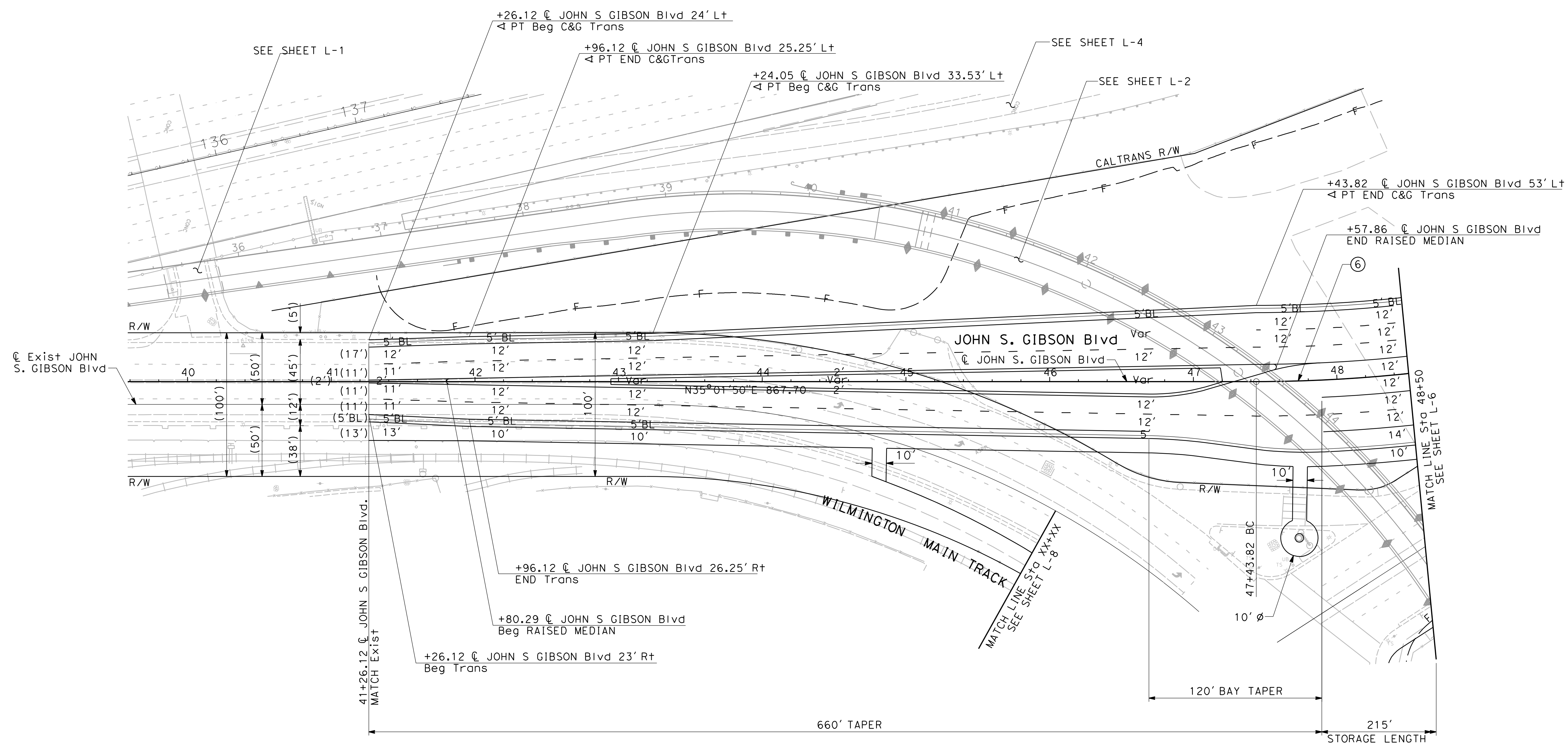

CURVE DATA

NO.	R	△	T	L
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THE PORT OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309

LADPW ENGINEERING Serving the Present · Designing the Future

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

B - PERMITS BD/BC

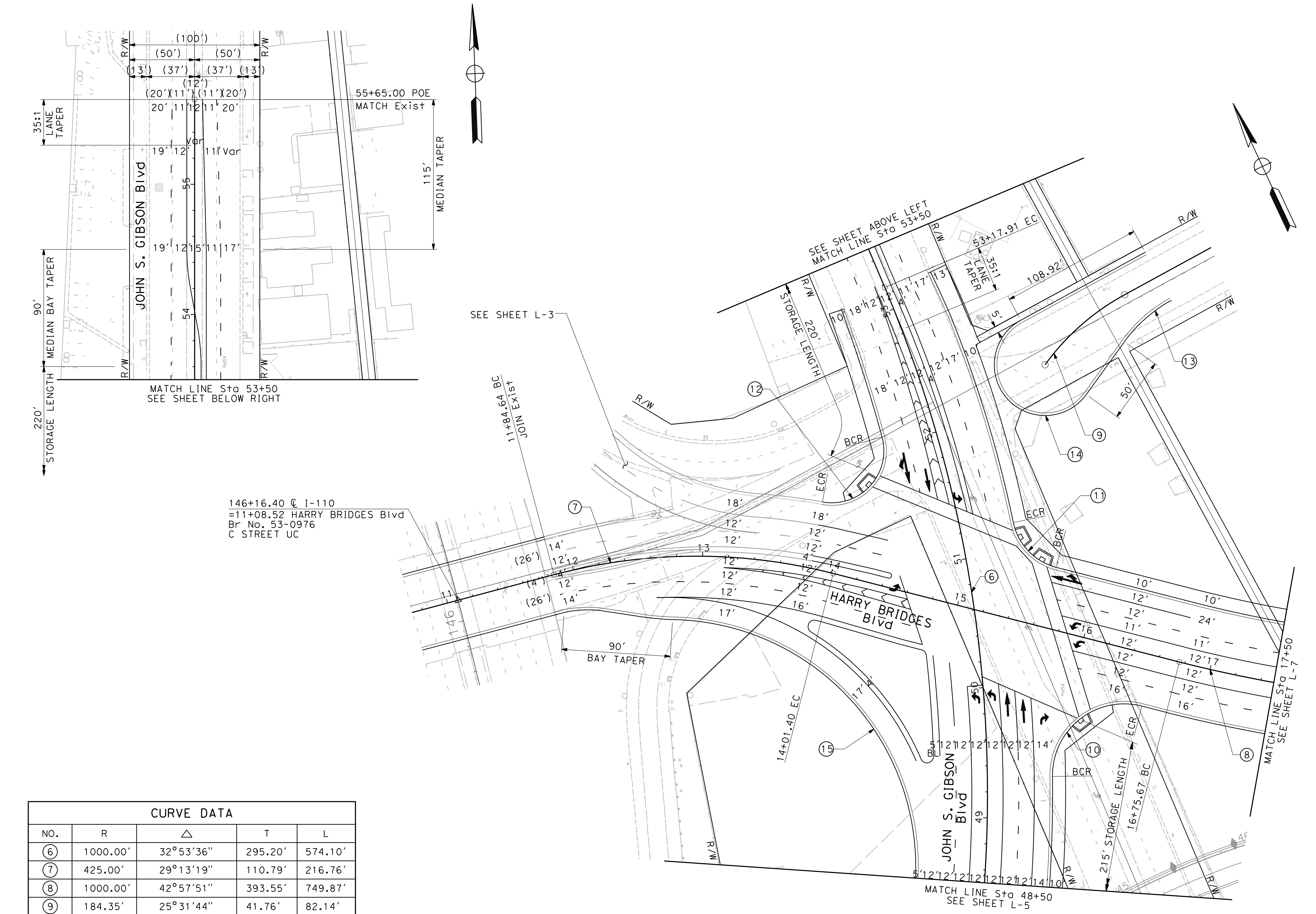
PLANS PREPARED BY: HDR | ONE COMPANY *Many Solutions*
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602

REGISTERED PROFESSIONAL ENGINEER STEVEN R. LEATHERS No. C 58063 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

DRAWING NO.
L-5

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

Sheet Version 2.01



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7	425.00'	29°13'19"	110.79'	216.76'
8	1000.00'	42°57'51"	393.55'	749.87'
9	184.35'	25°31'44"	41.76'	82.14'
10	55.00'	105°05'42"	71.80'	100.88'
11	35.00'	82°12'09"	30.53'	50.11'
12	40.00'	115°31'16"	63.42'	80.65'
13	109.00'	25°31'32"	24.69'	48.56'
14	39.00'	205°31'49"	172.14'	139.90'
15	190.00'	93°13'56"	201.03'	309.17'

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REVISION DATES (DESIGN STAGE ONLY)

Sheet Version 2.01

THE PORT OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309

LA DPW ENGINEERING — Serving the Present · Designing the Future

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

PLANS PREPARED BY:
HDR | ONE COMPANY *Many Solutions*
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200 92602
IRVINE, CA

REGISTERED PROFESSIONAL ENGINEER — STEVEN R. LEATHERS — No. C 58063 — Exp. 6/30/10 — CIVIL — STATE OF CALIFORNIA

NO. | REVISIONS: | DATE: | BY:

SERIAL NO. | WORK ACCEPTED | INDEX NO. | B - PERMITS BD/BC

BUREAU OF ENGINEERING APPROVAL: OFFICE: CHECKED BY: SIGNATURE: DATE:

DATE: LIC. NO.

ENGINEER: DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY:

VERTICAL CONTROL: HORIZONTAL CONTROL:

SHEET TITLE: PROJECT: ADDRESS:

PROJECT NO.

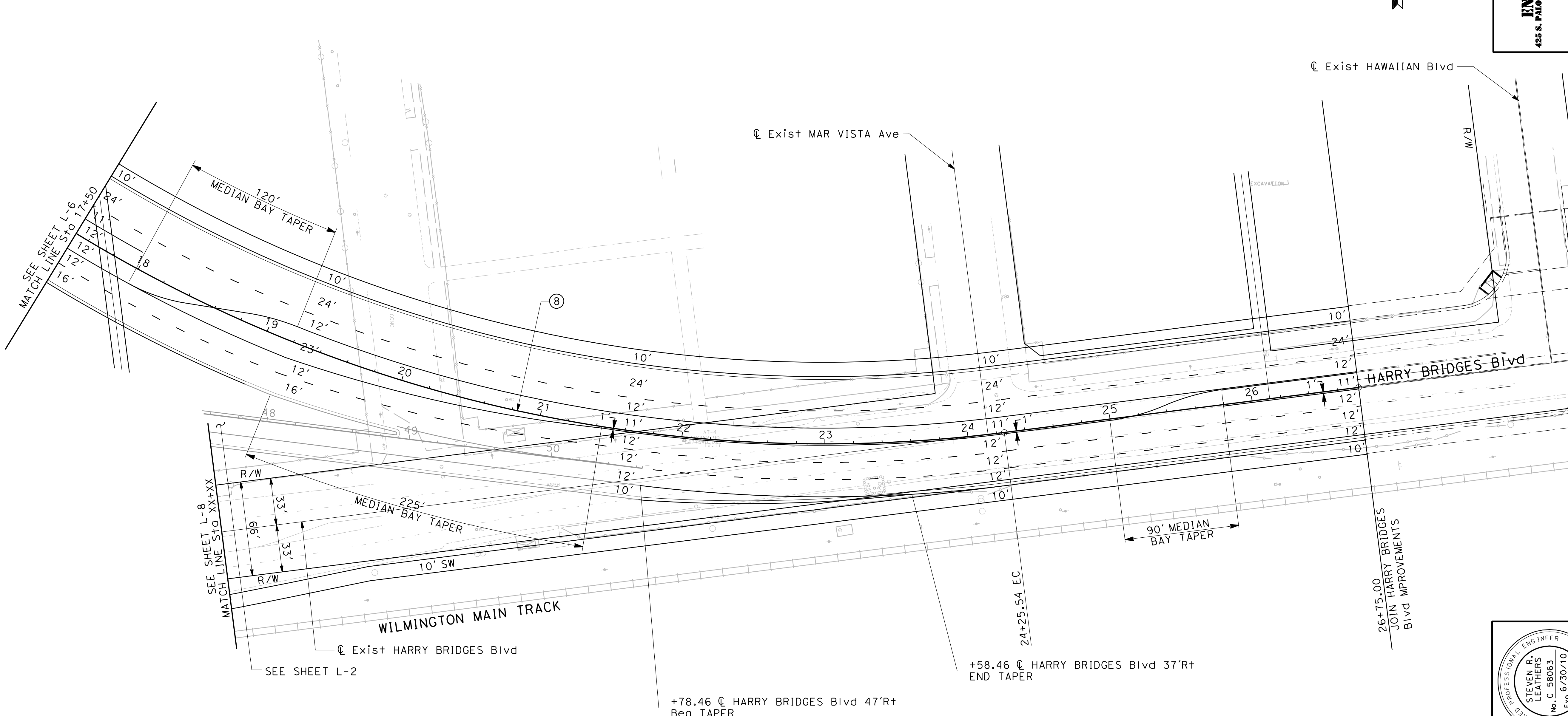
DRAWING NO.

L-6

SHEET OF

NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



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THE PORT OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309

PLANS PREPARED BY:
HDR | ONE COMPANY *Many Solutions*
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

LA DPW ENGINEERING Serving the Present ; Designing the Future

NO.	REVISIONS:	DATE:	BY:

WORK ACCEPTED
SERIAL NO.
INDEX NO.
B - PERMITS
BD/BC

BUREAU OF ENGINEERING APPROVAL:
OFFICE:
CHECKED BY:
SIGNATURE:
DATE:

ENGINEER:
LIC. NO.
DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

VERTICAL CONTROL:
HORIZONTAL CONTROL:
SHEET TITLE:
PROJECT:
ADDRESS:

PROJECT NO.
DRAWING NO.
L-7
SHEET OF

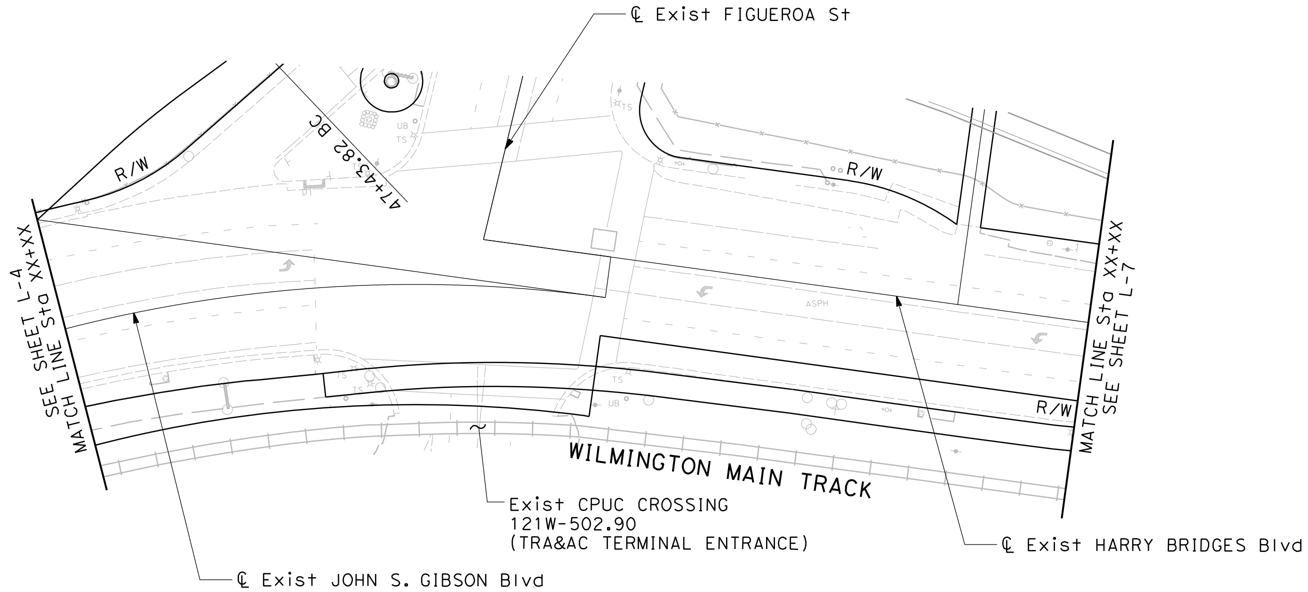
THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REVISION DATES (DESIGN STAGE ONLY)

Sheet Version 2.01

NOTE:

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



CURVE DATA				
NO.	R	△	T	L
8	1000.00′	42°57′51″	393.55′	749.87′

THE PORT OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309

LA DPW ENGINEERING — Serving the Present : Designing the Future

BUREAU OF ENGINEERING — DEPARTMENT OF PUBLIC WORKS — CITY OF LOS ANGELES

NO. | REVISIONS: | DATE: | BY:

WORK ACCEPTED | SERIAL NO.

B - PERMITS
BD/BC

INDEX NO.

BUREAU OF ENGINEERING APPROVAL:
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LIC. NO. | DATE:
ENGINEER:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

VERTICAL CONTROL:
HORIZONTAL CONTROL:
SHEET TITLE:
PROJECT:
ADDRESS:

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

PLANS PREPARED BY:
HDR | ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602

PROJECT NO.
DRAWING NO.
L-8
SHEET OF

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REVISION DATES (DESIGN STAGE ONLY)

Sheet Version 2.01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/2.9		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

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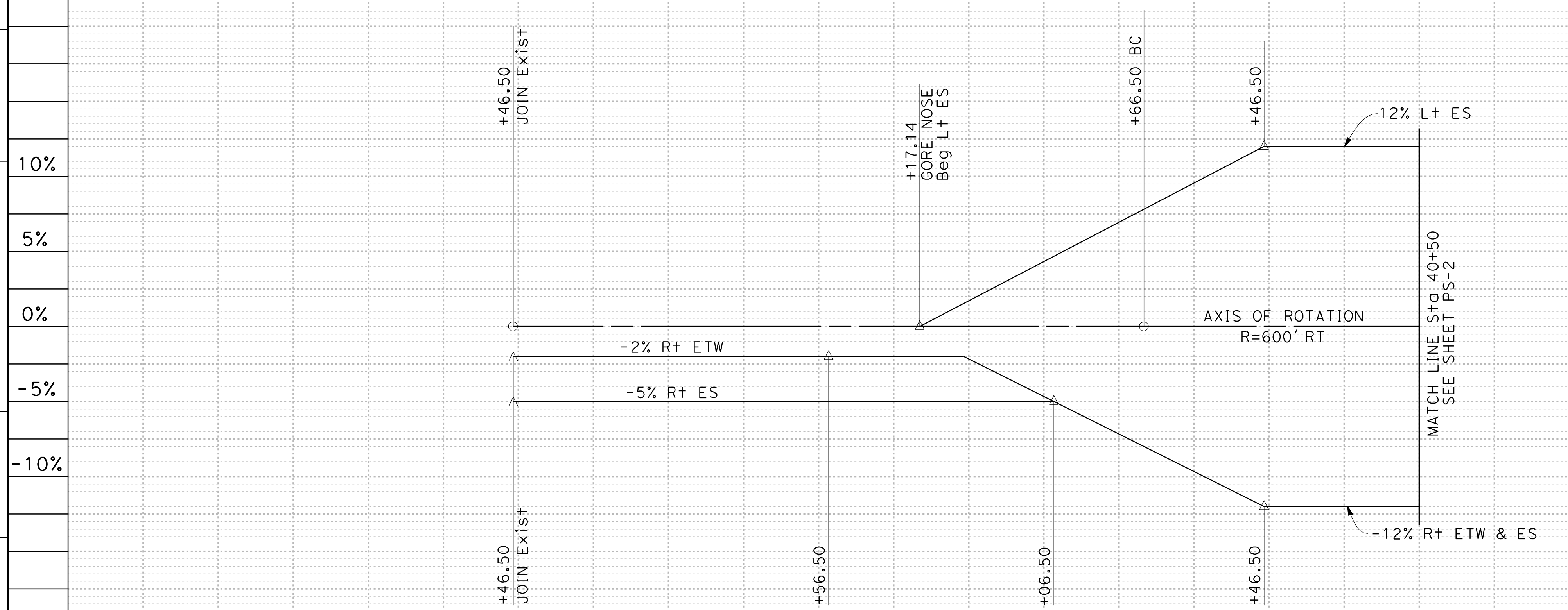
PORT OF LOS ANGELES
425 S. PALOS VERDES STREET
SAN PEDRO, CA 90731

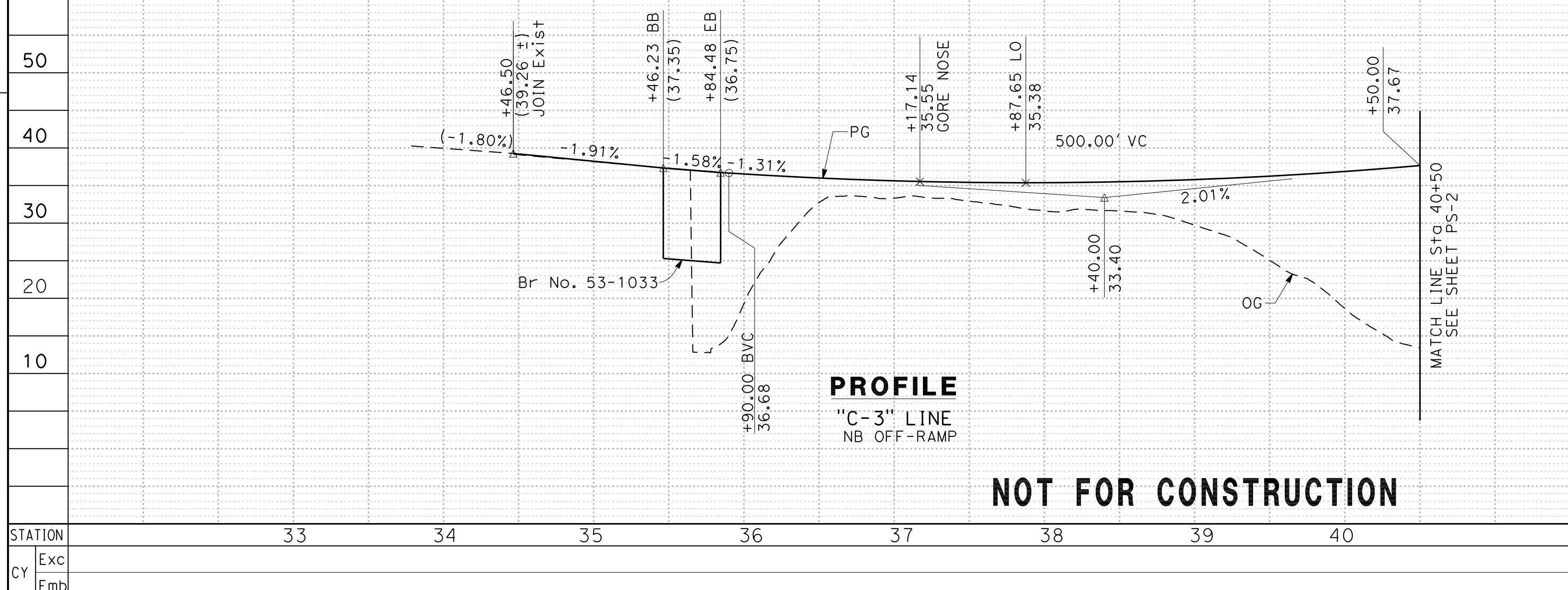
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602-1377

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: HAMID TOOSSI
CALCULATED-DESIGNED BY / CHECKED BY
REVISED BY: R.SHAH
DATE REVISED: S.LEATHERS



SUPERELEVATION DIAGRAM
"C-3" LINE
NB OFF-RAMP



PROFILE
"C-3" LINE
NB OFF-RAMP

NOT FOR CONSTRUCTION

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: HORIZ 1"=50'
VERT 1"=5'

PS-1

DATE PLOTTED => 09\18\09
TIME PLOTTED => 4:30:06 PM
LAST REVISION 00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/2.9		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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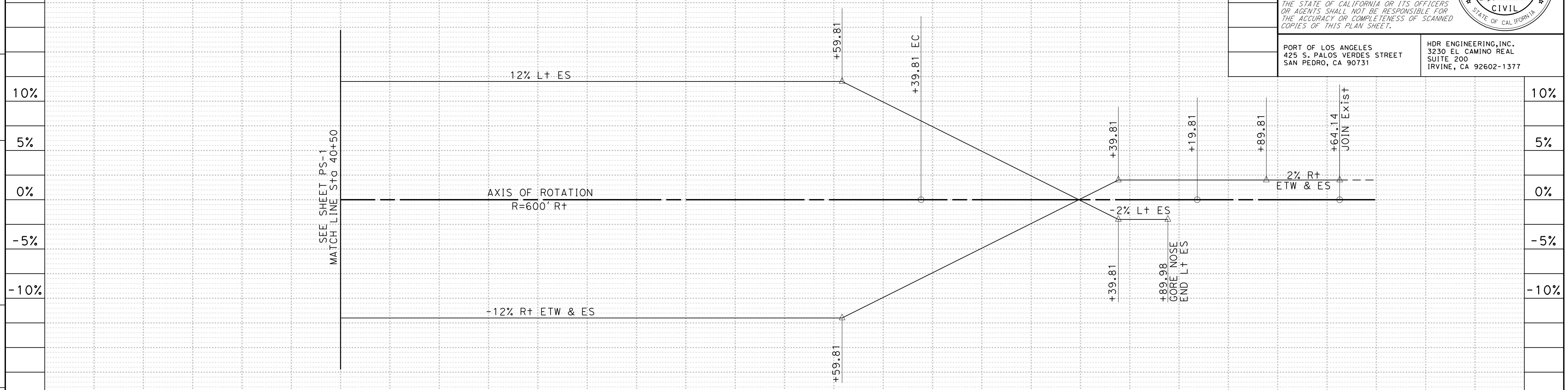
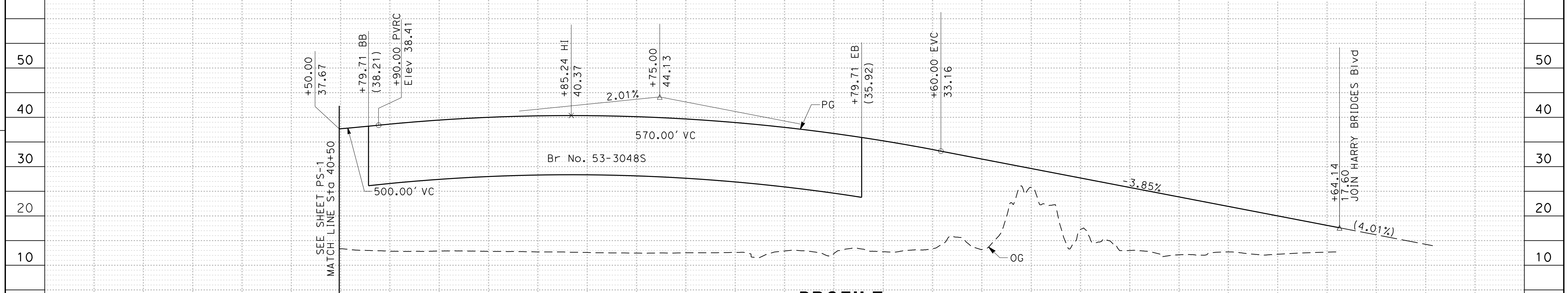
SAN PEDRO, CA 90731

HDR ENGINEERING,INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602-1377



SUPERELEVATION DIAGRAM
"C-3" LINE
NB OFF-RAMP



PROFILE
"C-3" LINE
NB OFF-RAMP

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: HORIZ 1"=50'
VERT 1"=5'

PS-2

NOT FOR CONSTRUCTION

STATION	41	42	43	44	45	46	47	48	49	50	51
CY Exc											
CY Emb											

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: HAMID TOOSSI

CALCULATED-DESIGNED BY: R.SHAH
CHECKED BY: S.LEATHERS

REVISED BY | DATE REVISED

DATE PLOTTED => 09\18\09
TIME PLOTTED => 4:30:11 PM
LAST REVISION 00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	110	2.5/2.9		

REGISTERED CIVIL ENGINEER DATE

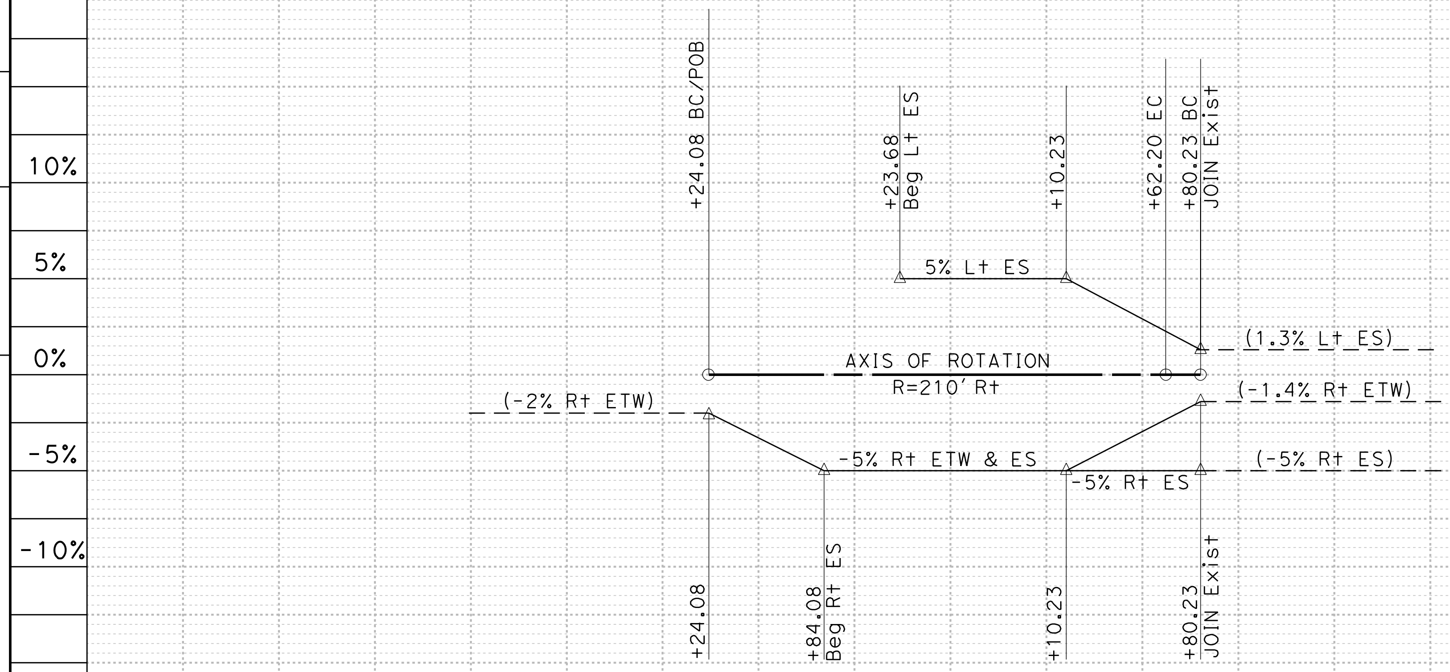
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER STEVEN R. LEATHERS No. C 58063 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

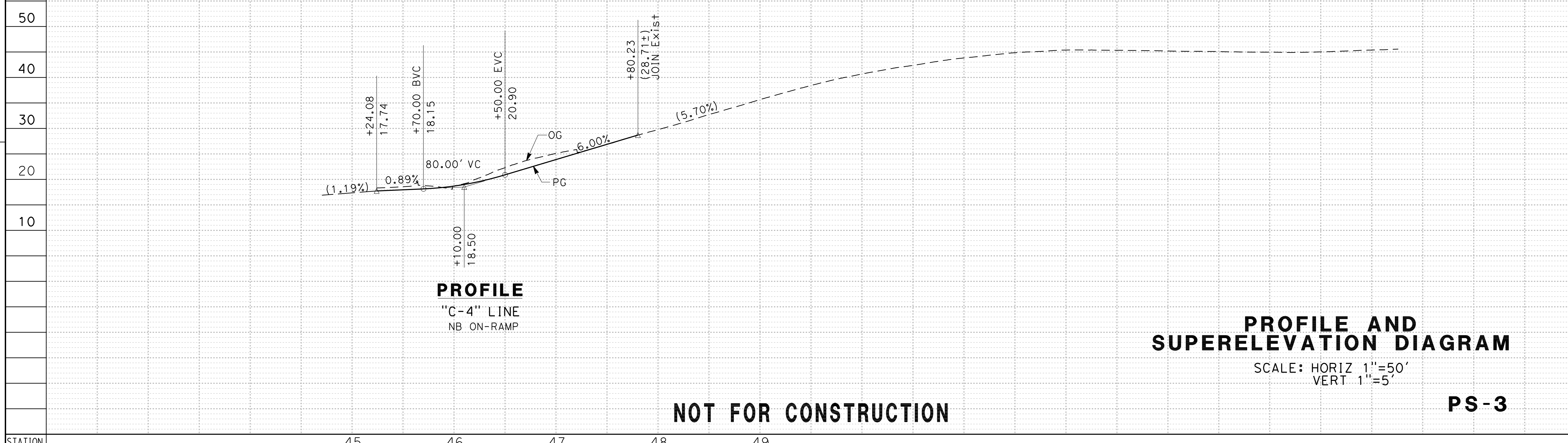
PORT OF LOS ANGELES
425 S. PALOS VERDES STREET
SAN PEDRO, CA 90731

HDR ENGINEERING,INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602-1377



SUPERELEVATION DIAGRAM

"C-4" LINE
NB ON-RAMP



PROFILE

"C-4" LINE
NB ON-RAMP

NOT FOR CONSTRUCTION

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: HORIZ 1"=50'
VERT 1"=5'

PS-3

CY	Exc
	Emb

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR HAMID TOOSSI

CALCULATED-DESIGNED BY R.SHAH | CHECKED BY S.LEATHERS

REVISED BY | DATE REVISED

DATE PLOTTED => 09\18\09
TIME PLOTTED => 4:30:15 PM

LAST REVISION 00-00-00

BORDER LAST REVISED 4/11/2008

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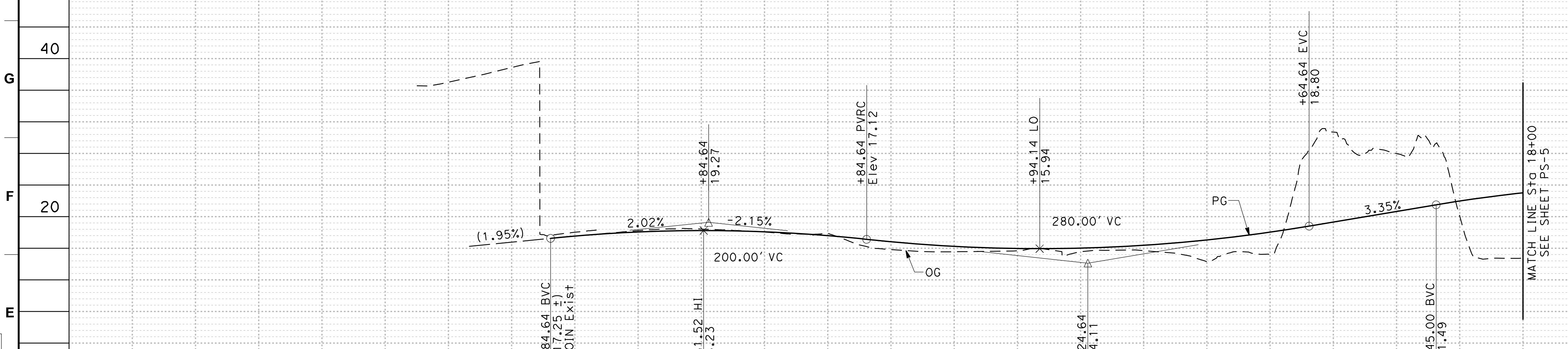
EA 264800



PROFILE

℄ HARRY BRIDGES Blvd

STATION 12 14 16 18

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: HORIZ 1"=40'
VERT 1"=4'

NOT FOR CONSTRUCTION

THE PORT OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309

PLANS PREPARED BY:
HDR | ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

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PROJECT NO.
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SHEET OF

REVISION DATES (DESIGN STAGE ONLY)

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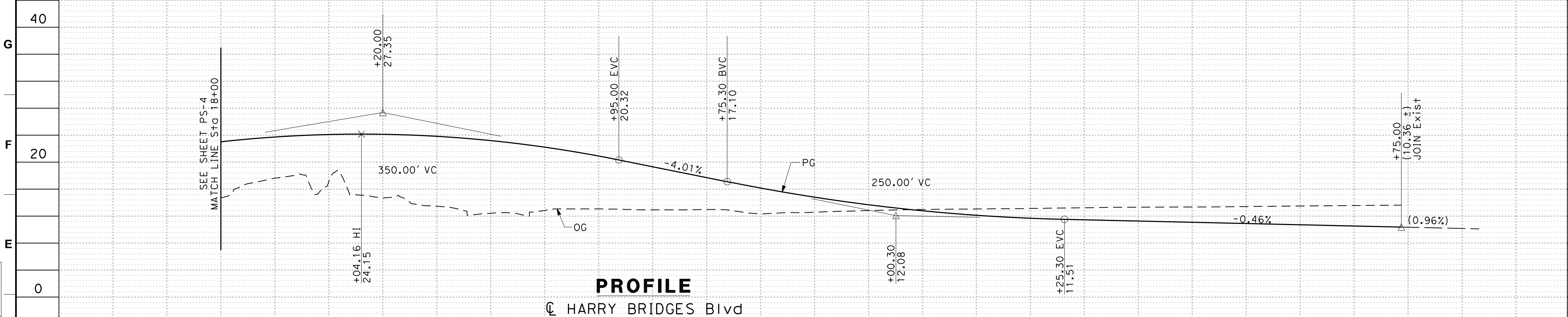

PROFILE

℄ HARRY BRIDGES Blvd

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: HORIZ 1"=40'
VERT 1"=4'

NOT FOR CONSTRUCTION

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REVISION DATES (DESIGN STAGE ONLY)

THE PORT OF LOS ANGELES
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425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309

PLANS PREPARED BY:
HDR | ONE COMPANY *Many Solutions*
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

LA DPW ENGINEERING Serving the Present · Designing the Future

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BUREAU OF ENGINEERING APPROVAL:
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DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

VERTICAL CONTROL:
HORIZONTAL CONTROL:
SHEET TITLE:
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PROJECT NO.
DRAWING NO.
PS-5
SHEET OF

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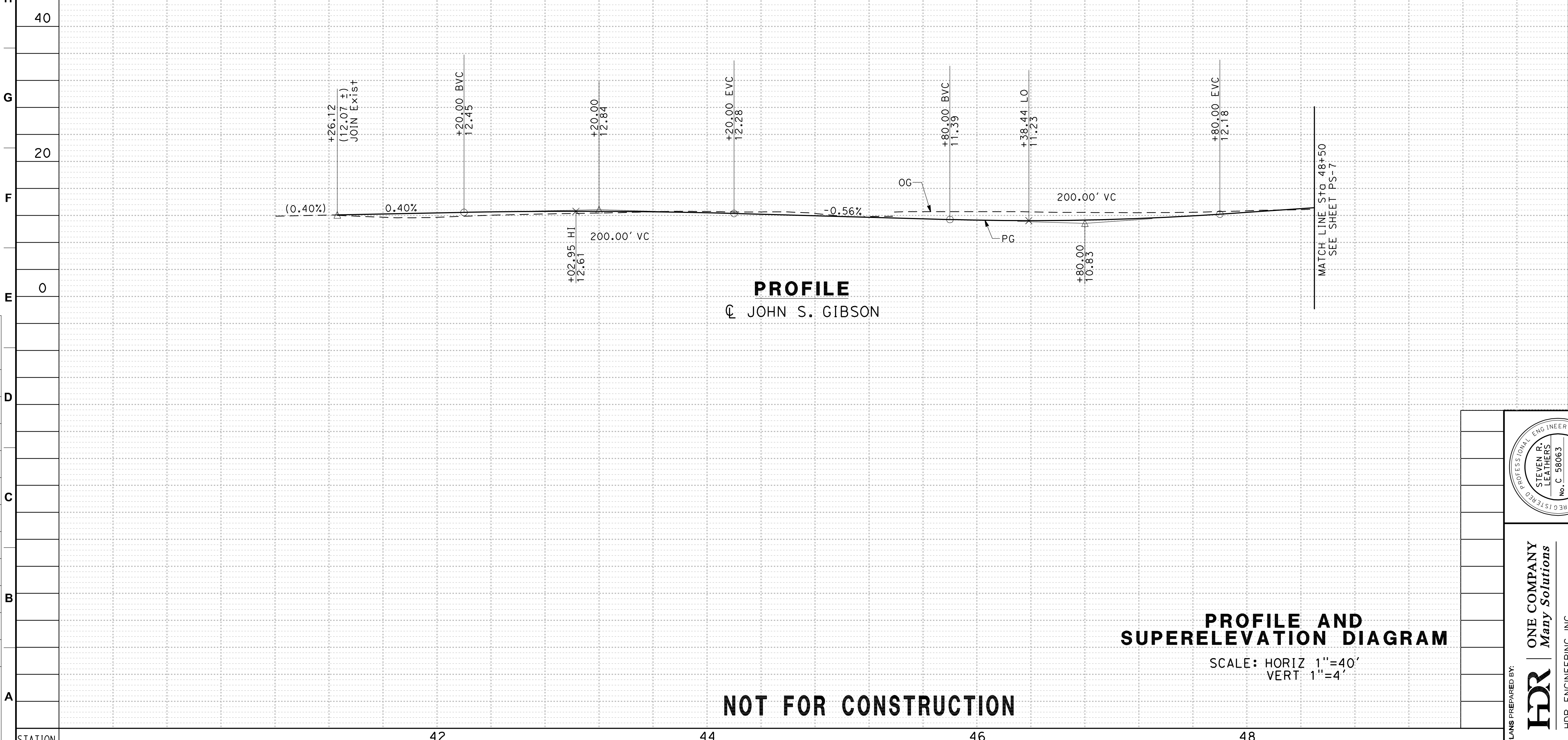

PROFILE

℄ JOHN S. GIBSON

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: HORIZ 1"=40'
VERT 1"=4'

NOT FOR CONSTRUCTION

THE PORT OF LOS ANGELES
ENGINEERING DIVISION
425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309

LA DPW ENGINEERING Serving the Present · Designing the Future

PLANS PREPARED BY:
HDR | ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200 92602
IRVINE, CA

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

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PROJECT NO.

DRAWING NO.

PS-6

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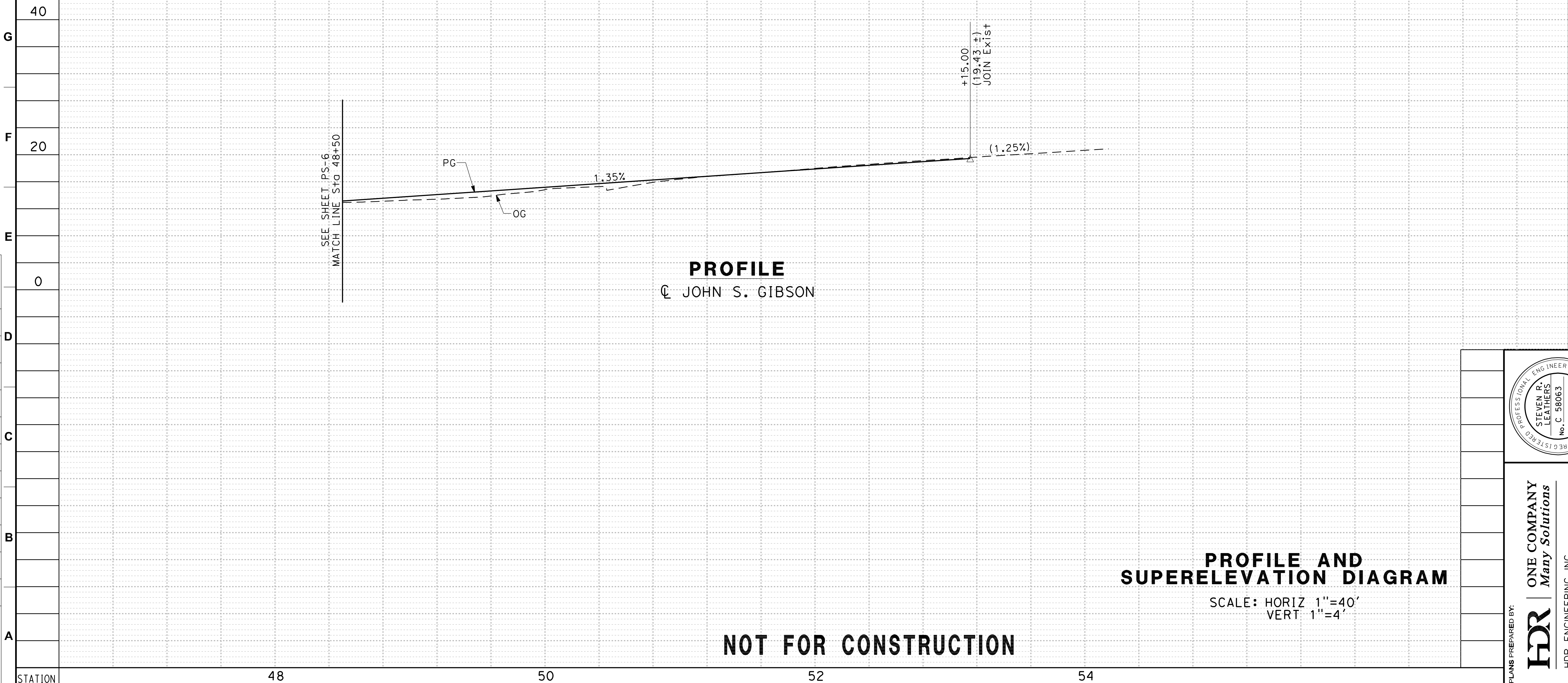
ENGINEERING DIVISION
425 S. PALOS VERDES STREET SAN PEDRO CA 90731-3309



PROFILE
℄ JOHN S. GIBSON

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: HORIZ 1"=40'
VERT 1"=4'

NOT FOR CONSTRUCTION

PLANS PREPARED BY:
HDR | ONE COMPANY *Many Solutions*
HDR ENGINEERING, INC.
3230 EL CAMINO REAL
SUITE 200
IRVINE, CA 92602

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. LEATHERS
No. C 58063
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

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WORK ACCEPTED

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DESIGNED BY:
DRAWN BY:
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APPROVED BY:

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PROJECT NO.
DRAWING NO.
PS-7
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Appendix E NOIS and Comment Letters

Transportation Projects Open House
Casa Abierta de Proyectos de Transportación

The Port of Los Angeles together with Caltrans, District 7, welcome you to our Open House for the Transportation Projects

- C Street/I-110 Access Road Improvements
- John S. Gibson Boulevard/I-110 Access Ramps Improvements & SR-47/I-110 Northbound Connector Widening

Wednesday, January 7, 2009—Banning's Landing Community Center
6:30 - 8:00 p.m.

Welcome!

This evening you have an opportunity to see updated concepts that have been developed to improve transportation in and around the I-110 Freeway and its connectors.

Please use this program as a guide to the evening's activities. We encourage you to use this when you visit the Project Stations.

Thank you for your participation in this process!

El Puerto de Los Angeles, junto con el Distrito 7 de Caltrans te saludo a venir a la Casa Abierta de los Proyectos de Trasportación

Miércoles , 7 de Enero de 2009 —Banning's Landing Community Center
6:30 - 8:00 p.m.

¡Bienvenidos!

Esta noche usted tiene la oportunidad de ver las ideas que se desarrollaron para mejorar la movilidad en y alrededor de la autopista I-110 y sus conectores.

Por favor use este programa como una guía para las actividades de esta noche. Los animamos que use este programa cuando visiten las estaciones de proyectos.

Gracias por su participación en este proceso!

Caltrans

THE PORT OF LOS ANGELES

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
&
C Street/I-110 Access Ramp Improvements

Caltrans

THE PORT OF LOS ANGELES

BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
Osgood Sargeant	571 W. 17th St	San Pedro Ca	562 833-9474	osgoodsgte gmail.com	San Pedro Skate Park, Association (501c3 Non Profit)
CARRIE SCOVILLE	415 W. ELBERON	SP CA	310-832-9622	CARRIE SCOVILLE @YAHOO.COM	CENTRAL SP NEIGHBORHOOD COUNCIL
Tyler Darby		Torrance, Ca	(310) 465-7935		San Pedro Sk8park Association
Transitions Skateshop	23642 Main St	Carson	(310) 518-5298		San Pedro Sk8park Association
Sunken City Skateshop	619 S Mesa St	San Pedro	(310) 833-6678		San Pedro Sk8 park Association
Geoff Scofild		Orange County	(714) 745-8996		San Pedro Skatepark Association

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

&

C Street/I-110 Access Ramp Improvements

Caltrans

THE PORT OF LOS ANGELES

BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
AGATA GOTFRYD	571 W 17th St. ~~SANP~~	SAN PEDRO 90731		AGOTFRYD@ GMAIL.COM	SAN PEDRO SKATE PARK ASSOCIATION
JESSE RIMOLDI	530 N. PALOS VERDES ST	San Pedro 90731			San Pedro Skate Park Association
Ana Dragin	CD 15				
Reynaldo & Maria Garibay	1319 W Robidoux st wilmington, ca.	—			
Allen Glasco	4252 Palmero Blvd	LA CA 90008	323-702-0602	allenglasco Yahoo.com	San Pedro Skate Park Association
Tyler Mumma		Dana Point	(949) 295-8312		San Pedro Skatepark Association

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

&

C Street/I-110 Access Ramp Improvements

BANNING'S LANDING COMMUNITY CENTER

Wednesday January 7, 2008

Caltrans

THE PORT OF LOS ANGELES

Name	Address	City & Zip	Phone	Email	Organization
Steven Ladogi	862 W. 30th St	San Pedro 90731	(310) 857-8461		San Pedro Skatepark Association
Kirk Jondle	938 Cristobal	Wilmington	310 830 3842		BLVD Blacksmith & Welding Works Inc
Donna Ethington	Berth 203 #9	Wilmington 90744	310 549-8111	bayprosvs@earthlink.net	Wilm Boat Owners PCYC WNC
Alexander Wilkerson	1080 Via Cordova	San Pedro 90732	310-832-1809		San Pedro SK8 Park Association
Josh Sandoval		Fullerton	(714) 227-6308		San Pedro SK8 Park Assocation
Vincent Vegas		San Pedro	(310) 918-3179		San Pedro SK8 Park Association

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

&

C Street/I-110 Access Ramp Improvements

Caltrans

THE PORT OF LOS ANGELES

BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
John Hargrave	1021 W 36th St	San Pedro 90731	310 567 8677	—	SPSA San Pedro SkatePark Association
Cesar Rimoldi	530 N. PALOS VERDES Street	San Pedro 90731	(310) 548 0224	—	San Pedro Skatepark Association
Derek Ladagi	862 W. 30th St	San Pedro 90731	(310) 579-7669	—	San Pedro Skatepark association
Ray Zimmerman		Long Beach		MRZ photo @mindspring.com	San Pedro Skatepark Association
Wallace Hampton		Long Beach		GSXRXTL@ yahoo.com	San Pedro Skatepark Association
Matthew Johnson		Long Beach		mjohnson@ americanclean stat.com	San Pedro Skatepark Association!
Chris Wilkerson	1080 Via Cordova	San Pedro 90732	310-832-1809		San Pedro SK8Park Association

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

&

C Street/I-110 Access Ramp Improvements

BANNING'S LANDING COMMUNITY CENTER

Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
CECILIA MORA	613 N. Gulf AVE	Wilmington 90744	(310) 489-3197	None	Coalition for Safe Environment
PAT ROME	25327 Pine CreekLANE	WILM. 90744	(310) 952-0533	PJWROME@YAHOO	Resident
Michele Bignardi	827 Eastmead	SP, 90731			
JosH Wilkerson				xtapo@hotmail.com	San Pedro Skatepark Association
Will TAYlor	571 W 17th st San Pedro 90731			wz.taylor@gmail.com	San Pedro Skatepark Asso.
Guillermo Jaimes	5610 Pacific Blv #203 ~~Huntington Park~~	Huntington Park 90255	(323) ~~[illegible]~~ 826-9771 x114	gjaimes@cbecal.org	Committee for a Better Environment
Lori Gastelum	1065 Eubank Wilm.	90744	310 780-3027	lorigastelum@yahoo.com	Community member

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

&

C Street/I-110 Access Ramp Improvements

BANNING'S LANDING COMMUNITY CENTER

Wednesday January 7, 2008

Caltrans

THE PORT OF LOS ANGELES

Name	Address	City & Zip	Phone	Email	Organization
JESSE N. MARQUEZ	P.O. BOX 1118	WILMINGTON 90744	310-834-1128	JNMARQUEZ @PRODIGY.NET	COALITION FOR A SAFE ENVIRONMENT
Joel Thurwachter	3311 W. Ball Rd Anaheim CA 92804	Anaheim 92804	714-827-4591		IGOE/2.
Bianca Villanueva	3711 Long Beach Blvd #801	LB 90807	562/997-0798	bianca.villanueva@asm.ca.gov	Bonnie Lowenthals Office, Dist 54.
Scott Minton	370 WISCONSIN UNIT 306	LONG BEACH 90814	(215) 688 3666	mintonphoto@gmail.com	SAN PEDRO SKATEPARK ASSOCIATION
TRACEY ZULIANI	POLA 425 S. Palos Verdes St	San Pedro CA		tzuliani@portla.org	POLA
Phil Nicolay	NWSPNC 877 EASTMAN Pl SAN PEDRO, CA 90732			Philip.Nicolay@ARCADIS-US.COM	NWSPNC
Kenneth Keener	1219 W. ALTON St.	WILMINGTON 90744	310 834-2331	KenKeener@aol.com	Resident

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

&

C Street/I-110 Access Ramp Improvements

BANNING'S LANDING COMMUNITY CENTER

Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
April Casillas	1010 Laverne Ave. ~~[illegible]~~	LB, 90803		aprilcasillas@ yahoo	SPSA
Mark BIALORUCKI	1203 W 'C' ST	WILMINGTON 90744			
ELIZABETH WARREN	Berth 77, P7A Ports O Call	San Pedro 90731	310-982-1323	ewarren@ futureports. org	FuturePorts
Ken Fredrickson	915 Wilshire Blvd.	LA 90017	619-694-7910	Ken_fredrickson@ urscorp.com	URS
JEANNE Lacombe	2052 Galerita	RPV 90275		chateau4us @earthlink.net	Rolling Hills Riviera HOA
[illegible]	425 S. Palos Verdes St	90731	310-732-3865	[illegible]@ portla.org	Port
DILIP MALAVE	420 OCEANWAY LB, CA-90802	90802.		dmm@iteris.com	ITERIS.

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

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C Street/I-110 Access Ramp Improvements

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THE PORT OF LOS ANGELES

BANNING'S LANDING COMMUNITY CENTER

Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
RINGOR, ROLANDO	853 W 17th St ~~SAPED~~	San Pedro	310-548-81-76		
Bonnie Marku	957 S. Village Oaks Drive	Covina	626-967-1510	Bonnie@mbimedia.com	MBI Media
Connie Rivera					ACTA
Rob O'Connell	707 30th STR APT#1	SAN PEDRO 90731	310 4202980	JUANRobert2001@Yahoo	S.P.S.A
Alan C. Velasco	3253 S. Pacific Ave SP CA	SP, CA	310 9223046	AlanCVelasco@Yahoo	SPSA
Michael Richards	3916 E. 2ND ST ~~LONG BEACH CA 90803~~	LONG BEACH 90803	(562) 370 6564	RichardsMBO@YAHOO.com	S.P.S.A.
Frank B. Anderson	515 North Meyler St.	San Pedro 90731-1846	310 8334113	fbmjet@aol.com	Central S.P. Neigh Council

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

&

C Street/I-110 Access Ramp Improvements

BANNING'S LANDING COMMUNITY CENTER

Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
Kathy DiTorio					Laborer's Local 802
Joseph Jakel	106 LaVerne	Long Beach	562-434 4584	jjakel@BCSconsultants.com	SPSA
Elvis Sogarda	474 E 3RD ST 7939 #7	Long Bch		elvisdesigns@yahoo.com	SPSA
Sofia Carrillo	521 N. AVALON #105	Wilmington Ca 90744	310)493-8994	sofiacarrillo@[illegible]	Coalition For A Safe Environment CFASE
BRIAN VENTIC	1632 BAY VIEW	WILMINGTON	310 400 2396	BVENTIC@PACBELL.NET	RESIDENT
Peter Lacombe	2052 Galerita RPV 90275		310-833 0443	chateau4us @earthlink.net	Rolling Hills Riviera HOA
Kerri Cacciata	370 Wisconsin #306	Long Beach Ca 90814		KCacciata @[illegible].com	SPSA
Brian Minshew	4201 Long Beach #317	Long Beach 90807	562-989-1919	Brian.Minshew @asm.ca.gov	ASM Furutani

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

&

C Street/I-110 Access Ramp Improvements

BANNING'S LANDING COMMUNITY CENTER

Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
Dianne Kelly	425 S Palos Verdes ~~San Pedro~~	San Pedro 90731	310 732-3500	Dkelly@ Portla.org	Port Police
Frank Herrera	200 W G.	Wilm 90744	310 835-1192		Coms.
ALAN HICKS	501 W OCEAN BL LONG BEACH	90802	202 510 5771	alan.hicks@ dot.gov	MARITIME ADMINISTRATION
Leslie Provenzano	100 W Walnut. Pasadena, CA	91124	626 440 6237	19pro@yahoo.com	
GARY YOUNG	1916 MARINA DR	S.P. 90732	310 8323907		PILE DRIVERS UNION
ROBERT YAMASAKI	3914 E 2nd	L.B. 90803	310 863-0162	rfyamasaki@yahoo.com	S.P.S.A.
Jodi Ford	724 N. Gaffey Pl	San Pedro 90731	(310) 7076507		

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

&

C Street/I-110 Access Ramp Improvements

Caltrans

THE PORT OF LOS ANGELES

BANNING'S LANDING COMMUNITY CENTER

Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
Bill Orton	State Senator Roderick Wright's Office			william.orton@sen.ca.gov	Please email PowerPoint + Notes.
Tony Rinsor	2922 S - Alma -	90731			DSY ES
Don Ferrara	6301 Via Ciega P.P.V CA 90275	90275	310 548-6505	—	M-1 Property owner 517 427 North Figueroa
Jose Alvarez	425 S. Palos Verdes San Pedro CA	90731	310-732 2646	jalvarez@portla.org	LA Port Police Community Relations Officer
Charlie Rico	513 West "D" St. Wilmington CA.	Wilmington CA 90744	(310) 834 5689	—	Wilmington Lions
Jose Becerra	1169½ North Fries Ave	Wilmington 90744	(310) 834-4234	—	Wilmington Resident
Andy Harris	1041 W 17th St SP, CA 90731	San Pedro	310 951-1394	sanpedro skatepark Association.org	SPSA

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

&

C Street/I-110 Access Ramp Improvements

BANNING'S LANDING COMMUNITY CENTER
Wednesday January 7, 2008

Name	Address	City & Zip	Phone	Email	Organization
Josh Brooks	1922 E. 4th St Long Beach	Long Beach 90802	608-834-1237	jcushingb @gmail.com	espn.com
ANA GOVORCIN	623 W. 22ND ST #4 SAN PEDRO, CA 90731		(310) 9418986	anasmotana @yahoo.com	
BYRON FORD	724 N GAFFEY PL SAN PEDRO, CA 90731		310 8329649		
Debbie Baker	540 N. Marine Av Wilmington, CA 90744		(310) 834-5233	DBaker@LiUNA802.org	Laborers Local 802
[illegible]	3133 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Aida Torres angel torres	1306 W. Enden st. Wilm. Ca 90744		(310) 835-7742		
John Mavar	820 S WALKER SP 90731		310344 0023	Johnmmavar @AOL	Northwest SP NC

U.S. Department of Homeland Security
FEMA Region IX
1111 Broadway, Suite 1200
Oakland, CA. 94607-4052

FEMA

January 8, 2009

Sara Burns, Environmental Planner
Caltrans District 7
100 South Main Street
Los Angeles, California 90012

Dear Ms. Burns:

This is in response to your request for comments on the Notice of Initiation of Studies & Open House, City of Los Angeles, Los Angeles County, California for the C Street/I-110 Access Ramps Improvements, Los Angeles County, California.

Please review the current effective Flood Insurance Rate Maps (FIRMs) for the City of Los Angeles (Community Number 060137) and County of Los Angeles (Community Number 065043), Maps revised September 26, 2008. Please note that the City and County of Los Angeles, California are participants in the National Flood Insurance Program (NFIP). The minimum, basic NFIP floodplain management building requirements are described in Vol. 44 Code of Federal Regulations (44 CFR), Sections 59 through 65.

A summary of these NFIP floodplain management building requirements are as follows:

- All buildings constructed within a riverine floodplain, (i.e., Flood Zones A, AO, AH, AE, and A1 through A30 as delineated on the FIRM), must be elevated so that the lowest floor is at or above the Base Flood Elevation level in accordance with the effective Flood Insurance Rate Map.

- If the area of construction is located within a Regulatory Floodway as delineated on the FIRM, any ***development*** must not increase base flood elevation levels. **The term *development* means any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials.** A hydrologic and hydraulic analysis must be performed *prior* to the start of development, and must demonstrate that the development would not cause any rise in base flood levels. No rise is permitted within regulatory floodways.

- All buildings constructed within a coastal high hazard area, (any of the "V" Flood Zones as delineated on the FIRM), must be elevated on pilings and columns, so that the lowest horizontal structural member, (excluding the pilings and columns), is elevated to or above the base flood elevation level. In addition, the posts and pilings foundation and the structure attached thereto, is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components.

- Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision. In accordance with 44 CFR, Section 65.3, as soon as practicable, but not later than six months after such data becomes available, a community shall notify FEMA of the changes by submitting technical data for a flood map revision. To obtain copies of FEMA's Flood Map Revision Application Packages, please refer to the FEMA website at http://www.fema.gov/business/nfip/forms.shtm.

Please Note:

Many NFIP participating communities have adopted floodplain management building requirements which are more restrictive than the minimum federal standards described in 44 CFR. Please contact the local community's floodplain manager for more information on local floodplain management building requirements. The City of Los Angeles floodplain manager can be reached by calling Mark Pestrella at (626) 458-5100. The County of Los Angeles floodplain manager can be reached by calling George De La O at (626) 458-7155.

If you have any questions or concerns, please do not hesitate to call Cynthia McKenzie, Senior Floodplanner of the Mitigation staff at (510) 627-7190.

Sincerely,

Gregor Blackburn, CFM, Branch Chief
Floodplain Management and Insurance Branch

cc:
Mimi Gutierrez, Port of Los Angeles
Mark Pestrella, Assistant Deputy Director, Department of Public Works, City of Los Angeles
George De La O, Senior Civil Engineer, Los Angeles County, Department of Public Works, Watershed Management Division
Garret Tam Sing/Salomon Miranda, State of California, Department of Water Resources, Southern District
Cynthia McKenzie, Senior Floodplanner, CFM, DHS/FEMA Region IX
Alessandro Amaglio, Environmental Officer, DHS/FEMA Region IX

John S Gibson Blvd Intersection & NB I-110 Ramp Access Improvements

Features

- Extends existing 2-lane NB I-110 onramp 500 feet
- Provides widening of exclusive EB right turn lane at the intersection to accommodate truck turns
- Provides SB and NB dual left lanes at the intersection
- Provides NB exclusive right turn lane into terminal
- Widens and improves terminal driveway to facilitate truck moves to/from freeway ramps
- Traffic signal improvements

Características

- Extiende la rampa de ingreso hacia la autopista I-110 Norte por 500 pies
- Provee ampliar carril exclusivo para doblar hacia mano derecha en la intersección para acomodar movimientos de camiones
- Provee dos carriles para doblar hacia la izquierda en el sur y el norte de la intersección
- Provee un carril exclusivo para tráfico yendo hacia el norte para hacer vueltas a la derecha hacia la terminal
- Ampliación y mejoramiento del la entrada de carros para facilitar movimiento de camiones al entrar y salir de la autopista
- Mejoramiento de semáforos de tráfico

Thank you for attending tonight's meeting!
Gracias por atender la reunión de esta noche!.

For additional information please contact:
Prashant Konareaddy
Civil Engineer Associate III
(310) 732-3362
Or visit the website:
:www.portofla.org

Para mas información por favor comuníquese:
Prashant Konareaddy
Civil Engineer Associate III
(310) 732-3362
O visite el pagina web:
www.portofla.org

WB SR 47 & NB I-110 Connector

Features

- Widen existing single lane connector to a dual lane connector
- Widens the existing John S. GIbson exit from a single-lane to a dual-lane exit
- Minimizes weaving between Front St on-ramp traffic and bridge traffic from Long Beach

Características

- Ampliar el conector de un carril a un conector de dos carriles
- Ampliar la rampa de salida en John S Gibson de un carril a dos carriles
- Minimiza conflictos entre trafico utilizando la rampa de ingreso en Front St. y trafico del Puente desde Long Beach

Thank you for attending tonight's meeting!
Gracias por atender la reunión de esta noche!.

For additional information please contact:
Prashant Konareaddy
Civil Engineer Associate III
(310) 732-3362
Or visit the website:
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Para mas información por favor comuníquese:
Prashant Konareaddy
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(310) 732-3362
O visite el pagina web:
www.portofla.org

I-110/"C" Street Interchange Improvements

Features

- Replace two intersections with one:
  - C St and Figueroa St
  - John S Gibson Blvd and Harry Bridges Blvd
- Construct a "free" right turn from the I-110 off-ramps
- Construct a cul-de-sac at "C" St and Figueroa Street
- Construct dual left turn lanes from WB Harry Bridges Blvd to SB John S Gibson Blvd
- Construct a new fly-over from NB I-110 to NB Figueroa St

Características

- Sustituye dos intersecciones con una:
  - C Street y Figueroa Street
  - John S Gibson Blvd y Harry Bridges Blvd
- Construir dos carriles para doblar hacia mano derecha para librar trafico para el salida de la autopista I-110
- Construir un callejón sin salida a C Street y Figueroa Street
- Construir dos carriles para doblar hacia mano izquierda desde Harry Bridges Blvd hacia el oeste a John S Gibson Blvd hacia el sur

Thank you for attending tonight's meeting!
Gracias por atender la reunión de esta noche!.

For additional information please contact:
Mimi Gutierrez
Civil Engineer Associate II
(310) 732-3339
Or visit the website:
www.portofla.org

Para mas información por favor comuníquese:
Mimi Gutierrez
Civil Engineer Associate II
(310) 732-3339
O visite el pagina web:
www.portofla.org

Ron Kosinski RRK

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Gaffey Place Neighbors

January 24, 2009

The Port of Los Angeles
Ms. Sue L Lai; Sr. Transportation Engineer
425 S. Palos Verdes Street
San Pedro, CA 90731

Department of Transportation
Mr. Douglas R. Failing; Director District 7
100 South Main Street
Los Angeles, CA 90012

RE: Community Comments
John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Winding C Street/I-110 Access Ramp Improvements

Dear Ms. Lai,

We are writing in response to the Port's request for community input on the CalTrans/Port of Los Angeles John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Winding C Street/I-110 Access Ramp Improvements projects.

Inclusion of Other Projects:

There are two other projects associated with this however they are being considered as separate elements and have separate design teams. These are the reconstruction of the Channel Street/John S. Gibson off ramps in San Pedro, and the "C" Street interchange in Wilmington. All three elements are designed to increase the flow of truck traffic to serve the Port. Since they are for the same purpose they should be considered part of the same project. To isolate them as three separate projects as presented would constitute "piecemealing".

SR-47/I-110 Interchange Impacts:

Black Hill was created at the turn of the 20th century from Port dredging. It is highly unstable and erosion is frequent. To cut into it to provide an extra lane for truck traffic would exacerbate this situation and jeopardize the residences above.

Residents on all sides of this interchange are already impacted by the physical vibrations from truck traffic. The vibrations have cracked our homes/pavements continue to wakes us at night. Trucks loudly accelerate and decelerate to/from the Vincent Thomas Bridge (SR-47) and the Harbor freeway (I-110) on/off ramps. They regularly blast their horns at all hours which is very disturbing to our neighborhood.

The Harbor Occupational Center is adjacent to the SR-47 which would be especially impacted by the increase in truck traffic.

Residents on all sides of this interchange are already impacted by the soot and dust created by the traffic on this interchange. We have to continually wash down our homes (inside and out), vehicles, and yards due to these particulates. Many of us suffer respiratory and other ill health effects from the truck exhaust due to this interchange. Trucks often get lost in our neighborhood due to inadequate highway signage and have a difficult time navigating down our maze of narrow streets and cul-de-sacs. The designated bike lanes around our neighborhood are dangerous as they share the road with Port truck traffic.

Gaffey Place Neighbors

There are no sound walls and the foliage has been removed which leaves us wholly exposed to the sight, sounds, light, pollution, and lack of privacy from the interchange traffic.

All of the above reflect the current situation. To add to this by increasing truck traffic through our neighborhood would be intolerable.

Mitigation:
It is our recommendation that CalTrans strongly consider the following for the SR-47/I-110 interchange:

- Advise on the steps that are being taken to ensure that our home values do not decrease due to the increased truck traffic
- Advise on the steps that are being taken to reduce/remove the graffiti and dumping in the area
- Install Permanent Air Quality monitoring station at the interchange to ensure air quality
- Install Permanent Noise, including Noise Vibration monitoring stations at the interchange
- Install Permanent Vibration monitoring stations at the interchange
- Install sound walls on all sides of the interchange
- Install a boundary fence (brick preferred) around Leland Park (residential safety issues/concerns)
- Complete brush clearing on the east side of I-110 and throughout the interchange
- Temporary installation of construction mesh on residential fences for privacy and to block dust, etc
- Community notification mechanism needed – signage, door hangers with a contact phone number, etc
- Post Caltrans project sign with contact info on fence/gates, especially at irrigation facilities
- Notification needed of herbicidal spraying – when and what chemicals are being used
- Post bilingual directional signs for truck routes
- Post "No Trucks" signs on SR-47 off-ramp at Gaffey Place
- Provide community access to parcel west of Gaffey Street. Work with community to develop a park, community garden, skate park or other public use for this site

We look forward to discussing/working with you on the noted options.

Thank you for your time

Charlotte Waters
President Black Hill Neighborhood Watch Committee
gaffeyplaceneighbors@yahoo.com

cc: City of Los Angeles
The Honorable Janice Hahn
Councilwoman, 15th District
638 S. Beacon St., Suite 552
San Pedro, CA 90731

Gaffey Place Neighbors

Name Charlotte R. Waters Date: 1·31·09
Name (print) Charlotte R. Waters Phone (option) (310)367-4045
Address 833 N. Gaffey Pl.
City San Pedro State Ca Zip 90731

Name Isela Lopez Date: 1/31/09
Name (print) Isela Lopez Phone (option) 3109387691
Address 555 UpLAnd Ave
City San Pedro State CA Zip 90731

Name Rodrigo Lopez Date: 1/31/2009
Name (print) [illegible] Phone (option) 3106649069
Address 553 Upland Ave
City San Pedro State CA Zip 90731

Name Maria Villaneda-Cavina Date: 1/31/09
Name (print) Maria Villaneda-Cavina Phone (option) 310 429-0719
Address 550 W. Upland AVE
City San Pedro State CA Zip 90731

Name Adolfo Bojorquez Date: 1-29-09
Name (print) ADOLFO BOJORQUEZ Phone (option)
Address 584 UPLAND AVE
City SAN PEDRO State Ca Zip 90731

Gaffey Place Neighbors

Name MICHAEL J. CONTRERAS Date: 2/3/09
Name (print) Michael J. Contreras Phone (option)
Address 823 N. GAFFEY PL.
City SAN PEDRO State CA. Zip 90731

Name Erica Phillips Date: 2/3/09
Name (print) Erica Phillips Phone (option)
Address 833 N. Gaffey Pl.
City San Pedro State CA Zip 90731

Name Michael A. Contreras Date: 2/9/09
Name (print) Michael A. Contreras Phone (option)
Address 823 N. Gaffey Pl
City San Pedro State CA Zip 90731

Name Frances J. Waters Date: 2/4/09
Name (print) Frances J. Waters Phone (option)
Address 833 N. Gaffey Place
City San Pedro State Calif Zip 90731

Name Jacqueline Moore Date: Feb 5, 2009
Name (print) JACQUELINE MOORE Phone (option)
Address 510 W. Elberon Ave
City SAN PEDRO State CA Zip 90731

Gaffey Place Neighbors

(Hurt Hand)

Name Scott, Joseph Date: 2/3/09
Name (print) Phone (option)
Address 633 No. Gaffey Pl
City San Pedro State Calif. Zip 90731

Name Rosemarie Contreras Date: 2/3/09
Name (print) Rosemarie Contreras Phone (option) 3105486444
Address 823 N. Gaffey PL.
City San Pedro State CA. Zip 90731

Name Rene St. Dennis Date: 2/3/09
Name (print) [signature] Phone (option)
Address 129 N. Gaffey Pl
City San Pedro State CA Zip 90731

Name Norberta Hernandez (Betty) Date: 2-3-09
Name (print) [signature] Phone (option) 310 8316577
Address 681 W. Central
City S.P. State Ca Zip 90731

Name Brittney Ford Date: 2/3/09
Name (print) [signature] Phone (option) (310) 832-9649
Address 721 N. Gaffey Pl.
City San Pedro State Ca Zip 90731

Gaffey Place Neighbors

Name: Richard Davis Date: 1/31/09
Name (print): JANICE E. DAVIS Phone (option):
Address: 928 N. GAFFEY PL
City: SAN PEDRO State: CA Zip: 90731

Name: NELSON & MARY CARRASQUILLO Date: 1-31-09
Name (print): NELSON Carrasquillo Phone (option):
Address: 916 N. Gaffey PLace
City: San Pedro State: CA Zip: 90731

Name: Peculia Blake Date:
Name (print): PECOLIA BLAKE Phone (option):
Address: 912 n Gaffey PL
City: San Pedro State: CA Zip: 90731

Name: Daneen D. O'Grady Date: 1/31/09
Name (print): DANEEN D. O'GRADY Phone (option):
Address: 909 N. GAFFEY PLACE
City: SAN PEDRO State: CA Zip: 90731

Name: [illegible] Date: 2-05-09
Name (print): Mauro Gonzale Phone (option):
Address: 680 w orland AV
City: San Pedro State: CA Zip: 90731

Gaffey Place Neighbors

Name Guadalupe Ortiz Date: 2/3/09
Name (print) ~~70~~ GUADALUPE ORTIZ Phone (option)
Address 701 N. GAFFEY PL
City SAN PEDRO State Ca. Zip 90731

Name Jimmy Sandoval Date:
Name (print) Jimmy Sandoval Phone (option) 310 831-3955
Address 602 N. Gaffey PL
City San Pedro State CA. Zip 90731

Name Melissa Coric Date: 2-3-09
Name (print) [illegible] Phone (option) (310) 831-0566
Address 680 W. Elberon Ave.
City San Pedro State CA Zip 90731

Name JOE IVCEVIC Date: 2/5/09
Name (print) [illegible] Phone (option) (310) 832 [illegible]
Address 621 N GAFFEY PL
City SAN PEDRO State CA Zip 90731

Name ~~Laura~~ Michael Rodriguez Date: 2/3/09
Name (print) Michael Rodriguez Phone (option) 833-6938
Address 627 North Gaffey Place.
City SAN PEDRO State CA Zip 90731

Gaffey Place Neighbors

Name Janice E. Davis Date: 1/31/09
Name (print) JANICE E. DAVIS Phone (option) 310/548-8551
Address 928 N. GAFFEY PL
City San Pedro State CA Zip 90731

Name Walter Clements Date: 1-31-09
Name (print) WAlter Clements Phone (option) 1-310-8374227
Address 691 Mac Arthur Ave
City San Pedro State CA. Zip 90731

Name Dorothy Clements Date: 1-31-09
Name (print) Dorothy Clements Phone (option) 510 8337427
Address 691 MacArthur Ave.
City San Pedro State Ca Zip 90731

Name JOSE Lopez Date: 2-3-09
Name (print) Jose Lopez Phone (option)
Address 683 MAC Arthur Ave
City SAN Pedro State ca Zip 90731

Name Byron & Jodi Ford Date: 2-3-09
Name (print) [illegible] Phone (option) (310) 7076507
Address 724 N. Gaffey Pl.
City San Pedro State CA Zip 90731

Gaffey Place Neighbors

Name JoAnn Flor - Jorge Hughes Date: 1-31-09
Name (print) JoAnn Flor - Jorg Hughes Phone (option)
Address 68 Crestwood St
City San Pedro State CA Zip 90731

Name Bobby Ford Date: 2-2-09
Name (print) Bobby Faro
Address 687 Upland Ave
City San Pedro State CA Zip 90731

Name Emily Waters Date: 02-03-09
Name (print) EMILY WATERS Phone (option)
Address 833 N. Gaffey Pl
City San Pedro State CA Zip 90731

Name Marcin Bowie Date: 2-3-09
Name (print) Marcin Bowie Phone (option) (310)831-2286
Address 826 1/2 N. Gaffey Pl
City San Pedro State CA Zip 90731

Name Maria L Samaniego Date: 2/3/09
Name (print) MARIA L. SAMANIGO Phone (option)
Address 715 N GAFFEY PL
City San Pedro State Ca. Zip 90731

Gaffey Place Neighbors

Name ADELL BALBERRY Date: 1-31-09
Name (~~print~~) Adell Balberry Phone (option)
Address 583 MAC ARTHUR
City SAN PEDRO State CALIF Zip 90731

Name A. Hamilton Date: 1-31-09
Name (print) April Hamilton Phone (option) 310-831-9161
Address 583 W. MacArthur Ave
City San Pedro State CA Zip 90731

Name Joyce M. William Date: 1-31-09
Name (print) Joyce M. Williams Phone (option)
Address 826 N. Gaffey Pl.
City San Pedro State CA Zip 90731

Name Liselotte Walker Date: 1.31.09
Name (print) Liselotte Walker Phone (option) (310) 831-2972
Address 602 Grand Ave
City San Pedro State Ca Zip 90731

Name Lupe Cisneros Date: 1-31-09
Name (print) Lupe Cisneros Phone (option)
Address 927 N Gaffey Pl
City San Pedro State Ca Zip 9073

Gaffey Place Neighbors

Name Elaine Stockett Date: 1.31.09
Name (print) Elaine Stockett Phone (option)
Address 927 N Gaffey Pl
City San Pedro State Ca Zip 90731

Name AL Davis Date: 1-31-09
Name (print) AL Davis Phone (option) N/A
Address 947 N. Gaffey Pl.
City San Pedro State CA. Zip 90731

Name Antonia Biramontes Date: 1-31-09
Name (print) Antonia Biramontes Phone (option) 310-938-3198
Address 963 N Gaffey plc
City San Pedro State CA Zip 90731

Name Maria Garcia Date: 1-31-09
Name (print) Maria Garcia Phone (option) 310-832-7317
Address 951 N Gaffey plc
City San Pedro State CA Zip 90731

Name Amen Ra Elohim Date: 1.31.09
Name (print) Amen Ra Elohim Phone (option)
Address 953 N. Gaffey Pl.
City San Pedro State Ca Zip 90731

Gaffey Place Neighbors

Name Norma Mata Date: 01/31/2009
Name (print) [illegible] Phone (option) 310) 548-9454
Address 940 N Gaffey Pl
City San Pedro State CA Zip 90731

Name [illegible] Date: 1-31-09
Name (print) DeVa[illegible] [illegible] Phone (option)
Address 941 N. Gaffey PL
City San Pedro State CA Zip 90731

Name John H Garcia Date: 01-31-09
Name (print) JOHN H GARCIA Phone (option) 310 832 2927
Address 921 N. GAFFEY PL
City SAN PEDRO State CA Zip 90731

Name KEVIN R GARCIA Date: 01-31-09
Name (print) Ken R Garcia Phone (option) (310) 832-2921
Address 921 N GAFFEY PL
City SAN PEDRO State CA Zip 90731

Name SHANNON NYHUS Date: 1-31-09
Name (print) Shannon Nyhus Phone (option) (310)8330109
Address 682 McARTHUR AVE.
City SAN PEDRO State CA Zip 90731

Gaffey Place Neighbors

Name: Mr Thomas Cooper — Date: 2/5/09
Name (print): Thomas Cooper — Phone (option): 303-537-6075
Address: 817 North Gaffey Pl. S
City: San Pedro — State: Ca. — Zip: 90731

Name: Elio Sanchez — Date: 2/5/09
Name (print): Elio Sanchez — Phone (option):
Address: 811 N. Gaffey Pl
City: San Pedro — State: CA — Zip: 90731

Name: J.O Ingram — Date: 2-05-09
Name (print): JO Ingram — Phone (option):
Address: 703 UPLAND AVE
City: — State: — Zip:

Name: Donald Doss — Date: 2/5/08
Name (print): — Phone (option):
Address: 1009 MacArthur AVE
City: SAN PEDRO — State: Ca — Zip: 90731

Name: PAUL MIRAMONTES — Date: 2.05.09
Name (print): [illegible] — Phone (option):
Address: 638 W UPLAND AVE
City: SAN PEDRO CA. 90731 — State: CA — Zip:

Gaffey Place Neighbors

Name Jo Anne Collins Date: 2-5-9
Name (print) J.A.C. Phone (option)
Address 609 MacArthur Ave E
City San Pedro State Calif Zip 90731

Name Angelica Juarez Date: 2-5-09
Name (print) Angelica Juarez Phone (option) 310.8720648
Address 595 W. Upland AVE
City San Pedro State CA Zip 90731

Name Adolfo Bojorquez Date: 2-5-09
Name (print) ADOLFO, BOJORQUEZ Phone (option)
Address 584 UPLAND AVE
City SAN PEdRO, State Ca Zip 90731

Name [illegible] Date: 2/5/09
Name (print) Regina Santiago Phone (option) (310)
Address 577-W-Upland AVE
City San Pedro State CA Zip 90731

Name ~~Ivan Adame~~ [illegible] Date: 2/5/09
Name (print) Ivan Adame Phone (option)
Address 594 W Upland Ave
City San Pedro State CA Zip 90731

Gaffey Place Neighbors

Name GABRIEL ZUNIGA Date: 2.5.09

Name (print) [illegible] Phone (option)

Address 568 W. Upland Ave

City San Pedro State Ca Zip 90731

Name Cherie Collazo Date: 2/5/09

Name (print) [illegible] Phone (option) 310-766-1971

Address 567 W Upland Ave

City San Pedro State CA Zip 90731

Name Jesus Recio Date: 2/05/09

Name (print) Jesus Recio Phone (option) (310)833-2508

Address 457 W elberon Ave

City san pedro State CA Zip 90731

Name Chantel Uribe Date: 2/5/09

Name (print) Chantel Uribe Phone (option) ~~714~~-229036[illegible]

Address 451 W ~~[illegible]~~ upland ave

City Sa pedro ca State CA Zip 90731

Name VANESSA RICH Date: 2/5/09

Name (print) LANCE & VANESSA RICH Phone (option) 3109849850

Address 445 W ELBERON AVE

City SAN PEDRO State CA Zip 90731

Gaffey Place Neighbors

Name Sandra Asoau Date: 01-31-09

Name (print) Sandra Asoau Phone (option)

Address 681 W. Upland Ave

City San Pedro State CA Zip 90731

Name WENCESLAO MURILLO Date: 01-31-09

Name (print) Phone (option) 310-2410633

Address 686 W. CRESTWOOD ST

City SAN PEDRO State CA Zip 90731

Name ~~Mary J. Ford~~ Date:

Name (print) ~~678 Crestwood St~~ Phone (option)

Address ~~San pedro~~

VOID

City State Zip

Name Mary J. Ford Date: 01-31-09

Name (print) ~~678~~ Mary J. Ford Phone (option) 310 833-9541

Address 678 Crestwood St

City Sanpedro State CA Zip 90731

Name Irene Lopez Date: 1/31/09

Name (print) Irene Lopez Phone (option) (310)548-3505

Address 669 Crestwood St.

City San Pedro State CA Zip 90731

Gaffey Place Neighbors

Name Raul Torres Date: 2-5-09

Name (print) Phone (option)

Address ~~Mac~~ Grand ~~Gran~~ St 603

City San Pedro State CA Zip 90731

Name Date:

Name (print) Phone (option)

Address

City State Zip

Name Date:

Name (print) Phone (option)

Address

City State Zip

Name Date:

Name (print) Phone (option)

Address

City State Zip

Name Date:

Name (print) Phone (option)

Address

City State Zip

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT:
Name Guillermo Jaimes Date 1-7-09
Address 5610 Pacific Blvd. # 202
City, State, Zip Huntington Park CA 90255
Email gjaimes@cbecal.org Phone (323) 826-9771

Please provide us your comments:

Propose alternative of using regarding use of Alameda Corridor in lieu of doing this project

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT

Name MARIA GARIBAY Date 1/7/08
Address 1319 . W Robidoux St
City, State, Zip Wilmington , Ca . 90744
Email
Phone (310) 835-6829

Please provide us your comments:

one of my comment's will you be able to provide more traffic lights & speed limit signs, and a lot's of green areas & trees for our community we need it for our children, that have ~~also~~ to deal with ~~cont~~ alergies & health problems.

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

C Street/I-110 Access Ramp Improvements

COMMENT CARD

PLEASE PRINT

Name ROBERT YAMASAKI Date 1-7-09

Address 3916 E 2nd ST.

City, State, Zip LONG BEACH, CA 90731

Email rfyamasaki@yahoo.com Phone (310) 863-0163

Please provide us your comments:

THE ADDITION OF THE CHANNEL ST. SKATEPARK TO SAN PEDRO HAS BECOME A VITAL PART OF THE HARBOR AREA COMMUNITY. IT IS IMPERATIVE THAT THE LOCAL COMMUNITY RETAINS USE OF THIS FACILITY.

THANK YOU

TRANSPORTATION PROJECTS OPEN HOUSE

Caltrans

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT

Name Kevin Cacciata Date 1-7-09

Address 370 Wisconsin #306

City, State, Zip Long Beach, CA 90814

Email kcacciata@mhmc.com Phone (714) 317-3525

Please provide us your comments:

I appreciate your willingness to work with, and around, the existing skatepark. The park has a great organization and group of people who will be very willing to help/consult, etc.

thanks!

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT

Name JESSE N. MARQUEZ Date 1-7-2008
Address P.O. BOX 1918
City, State, Zip WILMINGTON, CA 90748
Email JNMARQUEZ @ PRODIGY.NET Phone 310 - 834-1128

Please provide us your comments:

1. No Land Loss From Wilmington For Port Project
2. No Increase on Port Truck Traffic on Harbor Fwy
3. No Increase on Environmental Impacts
4. No Increase in Public Health Impacts

TRANSPORTATION PROJECTS OPEN HOUSE

Caltrans

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT

Name ANA GOVORCIN Date 01·07·09
Address 623 W. 22ND. ST. #4
City, State, Zip SAN PEDRO, CA. 90731
Email anasmotana@hotmail.com Phone (310) 9418986

Please provide us your comments:

AS THE PROJECT EVOLVES, WHAT IS THE BEST WAY FOR PEOPLE OF THE COMMUNITY TO STAY INFORMED REGARDING NEW DEVELOPMENTS AND CONTINUE TO VOICE THEIR CONCERNS IN EFFORT TO PROTECT THE SAN PEDRO SKATEPARK?

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT
Name Ana Govorcin Date 01-07-09
Address 623 W. 22ND. ST. #4
City, State, Zip SAN PEDRO, CA. 90731
Email anasmotana@hotmail.com Phone (310) 9418986

Please provide us your comments:

How can we be assured these projects will be an "improvement"? What data exists to support them?

TRANSPORTATION PROJECTS OPEN HOUSE

THE PORT

Caltrans

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT

Name Michael Richards Date 1/7/09

Address 3916 E. 2ND ST

City, State, Zip LONG BEACH, CA 90803

Email RICHARDSM80@YAHOO.COM Phone (562) 370-6564

Please provide us your comments:

AS A NON-PROFIT ORGANIZATION, OUR CONCERN IS MAINLY REGARDING STRUCTURES THAT ARE ALREADY IN PLACE. CRITICAL TO THIS ARE PLACEMENT OF ANY SUPPORTS FOR WIDENING. OUR HOPE IS THAT THROUGH COOPERATION, WE CAN ACHEIVE A SATISFACTORY SOLUTION FOR ALL PARTIES INVOLVED.

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

C Street/I-110 Access Ramp Improvements

COMMENT CARD

PLEASE PRINT

Name Dr Larry M. Nahms Date 1-7-09

Address 950 W. Santa Cruz St

City, State, Zip San Pedro, CA 90731

Email lnahms@lausd.net Phone (310) 547-4425

Please provide us your comments: The SR-47-110 Northbound Connector Widening will add lanes along the length of Harbor Transportation Center. This will increase the need for some type of sound ~~barrier~~ barrier. There may be an increase in air pollution and vibration - I am sure this can be mitigated.

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT

Name PAT ROME Date 01/07/08

Address 25327 PINE CREEK LANE

City, State, Zip WILMINGTON 90744

Email pjwrome@yahoo.com Phone (310) 952-0533

Please provide us your comments:

IS THIS PROJECT BEING COORDINATED WITH THE POLA & CRA PROJECTS & WILMINGTON WATERFRONT ?
WHY NOT FIX THE ENTRANCE TO THE V.T. Bridge + EXIT OFF OF #110 to HARBOR Blvd.
HOW LONG WILL THIS PROJECT TAKE TO BUILD?

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT

Name Josh Brooks Date 010709

Address 1922 E. 4th St.

City, State, Zip Long Beach, CA 90277

Email jcushingtb@gmail.com Phone 608-334-9237

Please provide us your comments:

Gibson I-110 / SR-47 connector appears to be a shipping issue more than a traffic issue, although it obviously pertains to traffic issues. There are other vital merge issues (i.e. Sepulveda). Please take these issues into account.

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT
Name ANDREW Harris Date

Address 1041 w 17th street

City, State, Zip SAN PEDRO, CA

Email Channelstreet@mac.com Phone

Please provide us your comments:

Are there several Different Design possibilities regarding the freeway supports that will be built in & around the skatepark? Is there a design on the board other than the one that places a support right in the middle of the park? Any way to avoid this design?

TRANSPORTATION PROJECTS OPEN HOUSE

Caltrans

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT

Name CHARLIE RICO Date 1-7-09

Address 513 WEST "D" ST.

City, State, Zip WILMINGTON CA

Email Phone (310) 834-5689

Please provide us your comments:

I AM ON THE WILMINGTON WATERFRONT DEVELOPMENT COMMITTEE I AM HAPPY WITH PROGRESS THE PORT HAS BEEN WORKING ON SINCE WE FIRST STARTED, THE BUFFER ZONE WILL SOON BEGIN AND THE THINKING THAT HAS BEEN PRESENTED HERE TONIGHT OF THE C STREET 110 GIVES US HOPE THAT AT LAST WE HAVE SOMETHING TO LOOK FORWARD TO IN THE FUTURE.

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT
Name Kenneth Keener Date 1/7/09
Address 1219 W. ALTON ST.
City, State, Zip WILMINGTON CA. 90744
Email kenkeener@aol.com Phone 310 [redacted] 834-2231

Please provide us your comments:
I live in the residential area bounded by the following: North of C street, east of Figueroa, west of Hawaiian, and south of Anaheim. I make frequent trips to San Pedro via the freeway. I currently exit the 110 at C St and turn left to drive north on Figueroa. The new design makes this impossible. (over)

I will have the new choice of going much further East on Harry Bridges to turn left and back track into my neighborhood, or

exit on Anaheim and make many turns back tracking into my neighborhood.

Why could there be some way to exit at Harry Bridges/C Street And proceed North on Figueroa?

Kenneth Keener Con't

THE PORT OF LOS ANGELES

TRANSPORTATION PROJECTS OPEN HOUSE

Caltrans

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT

Name Alan Velasco Date 1-7-09

Address 3253 S. Pacific Ave

City, State, Zip SAN PEDRO, CA 90731

Email Alancvelasco@Yahoo Phone 310 922 3046

Please provide us your comments:

CAN WE GET A WALL TO PROTECT THE PEOPLE AND SKATEPARK FROM TRASH (TRUCK PARTS) THAT MIGHT FALL.

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT
Name Guillermo Jaime Date 1-7-09
Address 5610 Pacific Blvd. #207
City, State, Zip Huntington Park, CA 90255
Email gjaimes@checcl.org Phone (323) 826-9771 x114

Please provide us your comments:

I'm concerned with the proximity of the skate park to the project, are there any measures to limit exposure to particulate matter from the truck traffic to the skaters?

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening
C Street/I-110 Access Ramp Improvements
COMMENT CARD

PLEASE PRINT

Name Allen V. Glasco Date 1/7/09
Address 4252 Palmero Blvd
City, State, Zip Los Angeles, CA 90008
Email allenglasco@yahoo.com Phone 323-702-0802

Please provide us your comments:

I'm concerned about the San Pedro Skatepark. If this project goes through will it effect the skatepark? Will the skatepark be allowed to expand?

TRANSPORTATION PROJECTS OPEN HOUSE

THE PORT OF LOS ANGELES

Caltrans

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

C Street/I-110 Access Ramp Improvements

COMMENT CARD

PLEASE PRINT

Name Josh Wilkerson Date 1/07/09

Address 1050 Via Cordova

City, State, Zip San Pedro, Ca 90732

Email xtapo@hotmail.com Phone 310-832-1809

Please provide us your comments:

Before I Knew of the channel st. skatepark I was lost & going no where fast, being an useless product to our society. Since the 1st Day I Came & skated ~~the~~ channel st park my life was saved. I have put all my free time, money, blood, sweat, & love into building & maintaining our skatepark. Channel St. skatepark gave me a purpose in life & it has inspired me & others. I pray every day & night that our skatepark will not be negatively effected by this caltrans improvement plan. more on back →

Josh Wilkerson cont.

our/my channel st skatepark has effected my life in an amazingly positive way. It also has taught me plenty of usefull + good work ethics. I have made hundreds of friends through the SK8park including skaters from across the globe. The channel st. Skatepark has generated a positive effect to all of the surrounding businesses also. Me & the visiting skaters, & all of the local skaters, young & old, spend their money eating, at buying drinks & all the surrounding Resteraunts, Diners, Liquor stores, gas stations, + even the automobile businesses. Our Localy skater built park is known as one of the best skateparks in the entire world! Skaters from every country + ever aspect of life dream of skating channel st or have & will be traveling to skate channel st. They also travel near + far just to lend their hands + money to help us build + maintain our SK8 park.

TRANSPORTATION PROJECTS OPEN HOUSE

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

C Street/I-110 Access Ramp Improvements

COMMENT CARD

PLEASE PRINT

Name SCOTT MINTON Date 1/7/09

Address 370 WISCONSIN, UNIT 306

City, State, Zip LONG BEACH, CA 90814

Email MINTONPHOTO @ GMAIL.com Phone (215) 688-3666

Please provide us your comments:

- IS IT POSSIBLE TO PROVIDE LIGHTING, EITHER ON THE NEW STRUCTURE OR THE ENTIRE LOT AT THE CHANNEL STREET SKATEPARK SITE?
- WOULD CALTRANS OR THE PORT OF LOS ANGELES BE INTERESTED IN PARTNERING WITH SPSA TO PROVIDE ALTERNATIVE OR ADDITIONAL SKATEPARK SITES ON UNUSED PROPERTY?

TRANSPORTATION PROJECTS OPEN HOUSE

THE PORT OF LOS ANGELES

Caltrans

John S. Gibson Blvd/I-110 Freeway Access Ramp Improvement & SR-47/I-110 Northbound Connector Widening

C Street/I-110 Access Ramp Improvements

COMMENT CARD

PLEASE PRINT

Name John Hargrave Date

Address 1021 W 36st

City, State, Zip San Pedro, CA, 90731

Email — Phone (310) 567-8677

Please provide us your comments:

I'v personally been enjoying our awsome Skatepark for many years. I have seen small, tiny, immature children transform into spectacular people due to the positive forces created by this small piece of land. So please try and avoid it. Thank You

[signature]

COMMENTS / QUESTIONS

1. HOW WILL BUFFER INTEGRATE w/ C STREET PROJECT?

2. <u>North-bound on 110 -</u>
By eliminating C-street offramp. NB travel is longer. along H.B. Blvd.

3. Wilmington residents do not want the ramp to be north Of H.B. Blvd. Please Keep project on Port side.

4. This project facilitates Port tentants & Big Box retailers, So Public funds should not be used.

Appendix F Environmental Commitments Record

Environmental Commitments Record

No.	Task and Brief Description	Responsible Party	Verification and Record Keeping	Timing/Phase	Action Taken to Comply with Task	Date
EXISTING AND FUTURE LAND USE (Section 2.1.1.1 in Environmental Document)						
LU-1	LAHD or its designee shall prepare a TMP to minimize direct and cumulative construction impacts on the community. The TMP shall be developed in consultation with the Los Angeles Department of Transportation and the California Department of Transportation, and it shall be provided with the construction plan to the City of Los Angeles Police Department and the City of Los Angeles Fire Department prior to commencement of construction activities. The TMP shall include the following implementation plans: • *Public Information:* Provide project updates to affected residents and businesses, including the general public, via brochures and mailers, community meetings, and web site information; • *Motorist Information:* Provide project information using changeable message signs and ground-mounted signs; • *Incident Management:* Implement Construction Zone Enhanced Enforcement Program , freeway service patrol, and California Highway Patrol traffic handling; and • *Traffic Management during Construction:* Provide a traffic lane closure chart, detour routes, pedestrian routes, residential and commercial access routes, and temporary traffic signals during construction.	LAHD	LAHD, Caltrans	Prior to construction During Construction activities		
COMMUNITY CHARACTER AND COHESION (Section 2.1.3.1 in Environmental Document)						
C-1	This mitigation measure is the same as MM LU-1. Please see above for details.	LAHD	LAHD, Caltrans	Prior to construction During Construction activities		
C-2	The LAHD would continue the public outreach program to keep residents, businesses, and any service providers within the project area informed, and to inform surrounding communities about the project construction schedule, traffic impacted areas and the TMP, and other relevant project information.	LAHD	LAHD, Caltrans	Final Design		
UTILITIES AND EMERGENCY SERVICES (Section 2.1.3.3 in Environmental Document)						
U&ES-1	LAHD shall work in close coordination with the utility service providers in advance of construction activities to relocate affected utilities and minimize impacts on consumers.	LAHD	LAHD, Caltrans	Final Design Prior to Construction		
U&ES-2	This mitigation measure is the same as MM LU-1. Please see above for details.	LAHD	LAHD, Caltrans	Prior to construction During Construction activities		

Environmental Commitments Record

No.	Task and Brief Description	Responsible Party	Verification and Record Keeping	Timing/Phase	Action Taken to Comply with Task	Date
TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES (Section 2.1.3.4 in Environmental Document)						
TR-1	This mitigation measure is the same as MM LU-1. Please see above for details.	LAHD	LAHD, Caltrans	Prior to construction During Construction activities		
VISUAL/ AESTHETICS (Section 2.1.3.5 in Environmental Document)						
VIS-1	Develop Context-Sensitive Solutions for the aesthetic and landscape treatments of the project elements based on the Caltrans Aesthetic and Landscape Master Plan.	Design Consultant	LAHD, Caltrans	Final Design		
VIS-2	Utilize drainage and water quality elements, where required, that maximize the allowable landscape. Place any water quality or detention ponds out of clear view of the interchange and the highway.	Construction Contractor	LAHD, Caltrans	Construction Phase		
VIS-3	Use a visually compatible ornamental groundcover in any detention/water quality basins or geoswales that are located within ornamental landscape areas.	Construction Contractor	LAHD, Caltrans	Construction Phase		
VIS-4	Landscape and revegetate disturbed areas to the greatest extent feasible. Landscaping should include appropriate irrigation, establishment, and maintenance to assure ongoing success of the plantings.	Construction Contractor	LAHD, Caltrans	Construction Phase		
CULTURAL RESOURCES (Section 2.1.3.7 in Environmental Document)						
CR-1	If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area shall be stopped until a qualified archaeologist can assess the nature and significance of the find.	LAHD's Resident Engineer and Contractor	LAHD, Caltrans	During all ground-disturbing and construction activities		
CR-2	If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the county coroner shall be contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner shall notify the Native American Heritage Commission (NAHC), which shall then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains shall contact Gary Iverson, Branch Chief of District 7, Division of Environmental Planning, so that he may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code Section 5097.98 are to be followed as applicable.	LAHD's Resident Engineer and Contractor	LAHD, Caltrans	During all ground-disturbing and construction activities		

Environmental Commitments Record

No.	Task and Brief Description	Responsible Party	Verification and Record Keeping	Timing/Phase	Action Taken to Comply with Task	Date
PALEONTOLOGY (Section 2.2.4.4 in Environmental Document)						
PAL-1	Develop a Program to Mitigate Impacts on Nonrenewable Paleontologic Resources Prior to Excavation or Construction of Any Proposed Project Components. This mitigation measure shall be carried out by a qualified vertebrate paleontologist consistent with the proposed guidelines of the Society of Vertebrate Paleontology. This shall include the following: 1. An assessment of site-specific excavation plans to determine areas that shall be designated for paleontological monitoring during initial ground disturbance; 2. Development of monitoring protocols for these designated areas. Areas consisting of artificial fill materials shall not require monitoring. Paleontologic monitors who are qualified according to Society of Vertebrate Paleontology standards shall be equipped to salvage fossils as they are unearthed to avoid construction delays and remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced if some of the potentially fossiliferous units described herein are determined upon exposure and examination by qualified paleontologic personnel to have a low potential to contain fossil resources; 3. Preparation of all recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils are essential to mitigate adverse impacts on the resources fully; 4. Identification and curation of all specimens into an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA compliance (Scott and Springer 2003). The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts on significant paleontologic resources is not considered complete until such curation into an established museum repository has been fully completed and documented; and 5. Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate lead agency along with	LAHD	LAHD, Caltrans	During all ground-disturbing and construction activities		

Environmental Commitments Record

No.	Task and Brief Description	Responsible Party	Verification and Record Keeping	Timing/Phase	Action Taken to Comply with Task	Date
	confirmation of the curation of recovered specimens into an established, accredited museum repository, will signify completion of the program to mitigate impacts on paleontologic resources.					

HAZARDOUS WASTE/MATERIALS (Section 2.2.5.4 in Environmental Document)

No.	Task and Brief Description	Responsible Party	Verification and Record Keeping	Timing/Phase	Action Taken to Comply with Task	Date
HAZ-1	To reduce the aerially deposited lead levels in the composite soil that shall remain on site, the upper 2.5 feet of soil adjacent to the existing roadways within a 150-foot radius of boring B-10 shall be removed and disposed off site as hazardous waste. The recommended depths of removal for the site are displayed graphically in the ISA. The ultimate extent of the excavation shall consist of the area bound by the existing edge of pavement and the limits of the excavation as shown on the plans, as deemed necessary for construction or as directed by the engineer. Upon completion of the recommended removals (within a 150-foot radius of boring B-10), the revised linear regression analysis of the composite of the upper 2.5 feet of soil remaining on site shall have a TTLC of less than 55 mg/kg and STLC of less than 5 mg/L, thereby clearing restrictions on the reuse of the remaining soil within the project limits.	Construction Contractor	LAHD, Caltrans	Prior to any grading or construction		
HAZ-2	Soils from deep excavations (greater than approximately 6 feet, particularly for CIDH pile foundation excavations) shall be stockpiled and secured as potential regulated waste pending environmental evaluation and laboratory testing to determine appropriate disposal or reuse of the excavated soils.	LAHD and Construction Contractor	LAHD, Caltrans	During all ground-disturbing and construction activities		
HAZ-3	Waste with TTLC levels greater than 1,000 mg/kg or STLC levels greater than 5 mg/L are in excess of California hazardous waste criteria and must be disposed of in a Class I hazardous waste landfill. In addition, waste with TTLC levels greater than 5 mg/L are in excess of federal hazardous waste criteria and must be disposed of in a Class I hazardous waste landfill. A remediation specialist should be consulted for options other than disposal off site.	Construction Contractor	LAHD, Caltrans	Prior to demolition or grading activities		
HAZ-4	The contractor shall prepare a project-specific lead compliance plan to prevent or minimize worker exposure to lead while handling material containing ADL. Attention is directed to Title 8, California Code of Regulations, Section 1532.1, “Lead,” for specific California Department of Industrial Relations, Division of Occupational Safety and Health Administration (OSHA), requirements when working with lead.	Construction Contractor	LAHD, Caltrans	Prior to demolition, grading, and activities		

Environmental Commitments Record

No.	Task and Brief Description	Responsible Party	Verification and Record Keeping	Timing/Phase	Action Taken to Comply with Task	Date
AIR QUALITY (Section 2.2.6.4 in Environmental Document)						
AQ-1	Construction contractor shall adhere to the current LAHD Sustainable Construction Guidelines for Reducing Air Emissions during project construction phase. The LAHD shall determine the applicable BMP's once the contractor identifies and secures a final equipmentlist and project scope.	Construction Contractor	LAHD	Construction Phase		
NOISE (Section 2.2.7.4 in Environmental Document)						
NOI-1	All equipment will have sound-control devices that are no less effective than those provided on the original equipment. No equipment will have an unmuffled exhaust.	Construction Contractor	LAHD, Caltrans	Construction Phase		
NOI-2	As directed by The Department, the contractor will implement appropriate additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.	Construction Contractor	LAHD, Caltrans	Construction Phase		
NOI-3	Noise control shall conform to the provisions in Section 14-8.02, "Noise Control," of the Standard Specifications and these special provisions.	Construction Contractor	LAHD, Caltrans	Construction Phase		
BIOLOGICAL ENVIRONMENT: ANIMAL SPECIES (Section 2.3.4.4 in Environmental Document)						
BIO-1	To avoid impacts on non-listed birds protected under the federal MBTA and similar state statutes, one of the following will be implemented: • No ground disturbance, site clearing, or removal of any potential nesting habitat will be conducted within the typical breeding/nesting season for birds (February 15 to September 1) or, If construction will occur during the bird breeding season, prior to any ground disturbing activities, a qualified biologist will conduct surveys for nesting birds (including raptors). The surveys will occur a minimum of 3 days prior to clearing, removal, or trimming of any vegetation. Surveys will include areas within 200 feet of the edge of the project boundary (as legally accessible) and the entire project site. If active nests are found, a 50-foot (minimum) temporary fence barrier will be erected around the nest site. For raptor nests that are found, a 200-foot buffer from construction activities will be required. No habitat removal or any other work will be allowed to occur within the fenced nest zone until a qualified biologist confirms that nesting is not longer active and/or	Construction Contractor and LAHD's Biologist/ Consultant	LAHD, Caltrans	Prior to Construction Construction Phase		

Environmental Commitments Record

No.	Task and Brief Description	Responsible Party	Verification and Record Keeping	Timing/Phase	Action Taken to Comply with Task	Date
	the young have fledged.					

BIOLOGICAL ENVIRONMENT: INVASIVE SPECIES (Section 2.3.6.4 in Environmental Document)

BIO-2	Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds. Equipment will also be inspected before arriving to the site and before leaving the site during the course of construction to reduce the potential of spreading noxious weeds	Construction Contractor	LAHD, Caltrans	Prior to and during construction activities		
BIO-3	All targeted vegetative material will be immediately removed from the project area. This includes small cuttings, leaves, branches, seeds, and vegetative litter	Construction Contractor	LAHD, Caltrans	Prior to and during construction activities		
BIO-4	Trucks with loads carrying vegetation will be covered and vegetation materials removed from the site will be disposed of in accordance with applicable laws and regulations	Construction Contractor	LAHD, Caltrans	Prior to and during construction activities		
BIO-5	Any areas within the limits of disturbance that remain unvegetated after construction has completed post-construction has completed will be hydroseeded with a seed mix restricted to local natives to promote recolonization of native vegetation. In addition, any landscaping within the BSA associated with this project will use native plant species. This measure would reduce the risk of providing optimal conditions for invasive species to colonize the area.	Construction Contractor	LAHD, Caltrans	Prior to and during construction activities		

Appendix G List of Acronyms

Appendix G: Acronyms and Abbreviations

μg/m^3	micrograms per cubic meter
AADT	annual average daily traffic
AB 1493	Assembly Bill 1493
AB 32	Assembly Bill 32
ACM	asbestos-containing material
ACTA	Alameda Corridor Transportation Authority
ADA	Americans with Disabilities Act
ADL	aerially deposited lead
ADT	average daily traffic
AFY	acre-feet per year
APE	area of potential effects
AQMP	air quality management plan
AQSR	Air Quality Study Report
ATCMs	Airborne Toxic Control Measures
Basin	South Coast Air Basin
BMPs	best management practices
BOD	biochemical oxygen demand
BSA	Biological Study Area
BT&H	Business, Transportation, and Housing
CAAQS	California Ambient Air Quality Standards
Cal-IPC	California Invasive Plant Council
CARB	California Air Resources Board
CDFA	California Department of Food and Agriculture
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CERFA	Community Environmental Response Facilitation Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH_4	methane
CNDDB	California Natural Diversity Database

CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CZMA	Coastal Zone Management Act of 1972
dB	decibels
dBA	A-weighted decibel
DO	oxygen, dissolved
EDR	Environmental Data Resources
EFH	Essential Fish Habitat
EIS/EIR	environmental impact statement/environmental impact report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
GHG	greenhouse gas
GSRDs	gross solids removal devices
GWP	global warming potential
HCP	Habitat Conservation Plan
HEI	Health Effects Institute
HFCs	hydrofluorocarbons
I-405	Interstate 405
IAC	interagency consultation
IPCC	Intergovernmental Panel on Climate Change
IRIS	Integrated Risk Information System
ISA	Initial Site Assessment
ITS	intelligent transportation systems
km	kilometers
kW	kilowatt

LACM	Natural History Museum of Los Angeles County
LADWP	Los Angeles Department of Water and Power
LAHD	Los Angeles Harbor Department
LBP	lead-based paint
LCP	Local Coastal Program
L_{eq}	equivalent noise level
L_{eq}(H)	hourly noise equivalent sound level
LOS	level of service
LUST	leaking underground storage tank
m	meters
MBA	methylene blue activated
mby	million barrels per year
MCE	Maximum Credible Earthquake
mg/kg	milligrams per kilogram
MLD	Most Likely Descendent
MLLW	mean lower low water
MPO	Metropolitan Planning Organization
MSATs	mobile-source air toxics
MSHCP	Multiple Species Habitat Conservation Plan
MSL	mean sea level
MTBE	methyltertiary butyl ether
MW	Moment Magnitude
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAC	noise abatement criteria
NAHC	Native American Heritage Commission
NCC	Notice of Construction Completion
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act of 1966, as amended
NO_2	nitrogen dioxide
NOA	naturally occurring asbestos
NOAA	National Oceanic and Atmospheric Administration

NOC	Notice of Construction
NTU	nephelometric turbidity units
O_3	ozone
Ocean Plan	Water Quality Control Plan for Ocean Waters of California
OSHA	Occupational Safety and Health Administration
OSTP	Office of Science and Technology Policy
PA	Programmatic Agreement
PAH	polycyclic aromatic hydrocarbons
PAL	project area limits
Pb	lead
PCBs	polychlorinated biphenyls
PFCs	perfluorocarbons
PM10	particulate matter less than or equal to 10 microns in diameter
PM2.5	particulate matter less than or equal to 2.5 microns in diameter
PMCLs	Primary Maximum Contaminant Levels
POAQC	projects of air quality concern
PPMP	Pollution Prevention and Monitoring Program
PTMP	Port Transportation Management Plan
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act of 1976
ROG	reactive organic gas
RSA	resource study area
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCIG	Southern California International Gateway
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMCLs	Secondary Maximum Contaminant Levels
SO_2	sulfur dioxide

STLC	soluble threshold limit concentration
SWMP	State Stormwater Management Plan
TACs	toxic air contaminants
TCLP	toxicity characterization leaching procedure
TDC	Targeted Design Constituents
Thermal Plan	Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California
TMP	Traffic Management Plan
TNM®	Traffic Noise Model
TOG	total organic gas
TSCA	Toxic Substances Control Act
TSM	transportation systems management
TTLC	total threshold limit concentration
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UWMP	Urban Water Management Plan

Appendix H Air Quality

Appendix H1

LOS ANGELES COUNTY RTIP PROJECTS				
SYS-TEM*	RTP ID	ROUTE	DESCRIPTION	PROJECT COST ($1,000'S)
L	LA0F003	0	LOS ANGELES STREET, OVER BIG DALTON WASH, 0.5 MI S IRWINDALE AVE. WIDEN 2-LANE BRIDGE TO 4-LANE BRIDGE, ADD SHOULDERS, UPGRADE BRIDGE RAILING (# 53C0676)	$11,649
L	LA0F004	0	DELL AVE, OVER CARROLL CANAL, 0.2 KM S OF VENICE BLVD. REHABILITATE 1 LANE BRIDGE AND WIDEN TO 2 LANE BRIDGE, ADD SIDEWALKS, UPGRADE BRIDGE RAILINGS. (# 53C1688)	$3,500
L	LA0F005	0	DELL AVENUE, OVER LINNIE CANAL, 0.25 KM S OF VENICE BLVD. REHABILITATE 1 LANE BRIDGE & WIDEN TO 2 LANE BRIDGE, ADD SIDEWALKS, UPGRADE BRIDGE RAILINGS (# 53C1689)	$4,000
L	LA0F006	0	DELL AVENUE, OVER SHERMAN CANAL, 0.25 MI S VENICE BLVD. REHABILITATE 1 LANE BRIDGE & WIDEN TO 2 LANE BRIDGE ADD SIDEWALKS, UPGRADE BRIDGE RAILINGS. (# 53C1691)	$4,000
L	LA0F007	0	HYPERION AVE. OVER GLENDALE BL SB, LA RIVER, SOUTHBOUND GLENDALE. SEISMIC RETROFIT & RECONFIGURE SIDEWALKS, RESTORE HISTORIC BRIDGE RAILINGS (NO BRIDGE WIDENING) (# 53C1881)	$12,719
L	LA0F008	0	GLENDALE BLVD. OVER L.A RIVER, REHABILITATE 2 LANE BRIDGE & WIDEN TO INCLUDE SHOULDERS, SIDEWALKS, AND RESTORE HISTORIC BRIDGE RAILINGS (NON CAPACITY) # 53C1883)	$12,000
L	LA0F009	0	GLENDALE BLVD. - OVER LA RIVER. REHABILITATE 2 LANE BRIDGE & WIDEN TO INCLUDE SHOULDERS, SIDEWALKS, RESTORE HISTORIC RAILINGS (NON-CAPACTIY PROJECT) (# 53C1884)	$10,000
L	LA0F010	0	OLD ROAD, OVER SANTA CLARA RIVER, 1/4 MI N MAGIC MTN PKWY. REPLACE 4 LANE BRIDGE W/ 6 LANE BRIDGE (HBRRP PAY FOR 4 LANE, & NEWHALL LAND &FARMING PAYS FOR 2 ADDIT. LANES) (# 53C0327	$21,500
L	LA0F011	0	OCEAN BLVD. OVER ENTRANCE CHANNEL, UP RR, 1.0 MI E STATE ROUTE 47. REPLACE EXISTING 5 LANE GERALD DESMOND BRIDGE WITH NEW 6 LANE BRIDGE (BRIDGE #53C0013) (ALSO LA000512)	$26,500
L	LA0F016	0	PURCHASE, INSTALL, AND INTEGRATE OPTICOM PRIORITY CONTROL SYSTEM TO EXISTING TRAFFIC CONTROLLERS AT VARIOUS LOCATIONS WITHIN CITY LIMITS. (SAFETEA-LU#2345)	$217
L	LA0F019	0	PURCHASE OF BUS BENCHES, TRASH CANS, AND SMALL SHELTERS FOR VARIOUS TRANIST STOPS THROUGHOUT CITY OF LAKEWOOD.	$493
L	LA0F020	0	LOWER ARROYO SECO TRAIL AND TRAILHEAD IMPROVEMENT PROJECT (GRANT FROM RECREATIONAL TRAILS PROGRAM)	$258
L	LA0F030	0	I-110 FREEWAY/ 'C' STREET INTERCHANGE IMPROVEMENTS- MODIFICATION OF EXISTING INTERCHANGE	$24,798
L	LA0F033	0	PLANNING SERVICES ARROYO SECO PARKWAY SCENIC CORRIDOR & IMPLEMENTATION OF CORRIDOR MGMT PLAN. SCENIC BYWAY ORGZN & VISTOR INTERPRETATION & MARKETING PLAN.FHWA PRJ SB-2004-CA-51312	$372
L	LA0F038	0	IMPROVEMENTS TO THIS INTERSECTION INCLUDE DURATHERM DECORATIVE CROSSWALKS AND RESURFACING ON WESTERN AVE.	$151

Cost in Thousands

Local Highway

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
LAE0891	Los Angeles	SCAB		LAE0891	NCR31				L	EXEMPT	0	2008
							PTC	96	Agency	PICO RIVERA		

ROSEMEAD BLVD/HWY 19 RENOVATION PROJECT - NON-CAPACITY

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
DEMO-SAFETEA-LU			80	80		80						80
CITY FUNDS			16	16	13	3						16
LAE0891 Total			96	96	13	83						96

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
LA996340	Los Angeles	SCAB		LA996340	NCN31				L	NON-EXEMPT	0	2008
							PTC	47,983	Agency	POMONA		

MISSION BLVD. GRADE SEPARATION AT SR. 71(FROM UPRR UNDERCROSSING TO 9TH ST. MISSION BLVD FROM WESTERN TO CURRAN PLACE (CFP 6340, 8400). PPNO 2232. SAFETEA-LU # 511 (PPNO 2232)

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
DEMO-SAFETEA-LU			3,360	3,360	2,688	672						3,360
DEMO - TEA 21			1,250	1,250	1,250							1,250
STP LOCAL			4,884	4,884	4,884							4,884
CITY FUNDS			5,426	5,426	1,796	3,003	627					5,426
LOCAL TRANS FUNDS	1,747	4,627	7,197	13,571	13,571							13,571
PROP "C25" FUNDS			16,379	16,379	15,592	787						16,379
TRAFFIC CONGESTION RELIEF			3,113	3,113	2,326	787						3,113
LA996340 Total	1,747	4,627	41,609	47,983	42,107	5,249	627					47,983

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
LA0D390	Los Angeles	SCAB		LA0D390	CARH3				L	NON-EXEMPT	0	2008
							PTC	67,800	Agency	PORT OF LOS ANGELES		

THE PROJECT IMPROVES THE INTERSECTION AND I-110 ON/OFF-RAMPS AT JOHN S. GIBSON; AND ENHANCES THE OPERATION AND SAFETY OF THE I-110/SR 47/HARBOR BLVD INTERCHANGE CONNECTOR(SAFETEA-LU HPP # 2885. Addition of left and right turn lanes. Length of project - 1

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
DEMO-SAFETEA-LU			4,000	4,000				4,000				4,000
PROP "C25" FUNDS			7,420	7,420				3,655	3,765			7,420
PORT FUNDS	1,000		15,332	16,332	500	500		7,666	7,666			16,332
LA0D390 Total	1,000		26,752	27,752	500	500		15,321	11,431			27,752

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	System	Conformity Category	Amend	Source
LA0F030	Los Angeles	SCAB		LA0F030	NCRH3				L	EXEMPT	0	2008
							PTC	24,798	Agency	PORT OF LOS ANGELES		

Project will improve flow of traffic from I-110 Fwy on/off-ramps at C Street by consolidating two closely spaced intersections into one.

Fund	ENG	R/W	CON	Total	Prior	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	Total
PROP "C25" FUNDS			6,647	6,647				1,614	3,322	1,711		6,647
PORT FUNDS			15,151	15,151				5,652	3,944	5,555		15,151
LA0F030 Total			21,798	21,798				7,266	7,266	7,266		21,798

Appendix H2

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MEETING OF THE

TRANSPORTATION CONFORMITY WORKING GROUP

Tuesday, January 26, 2009
10:00 a.m. – 12:00 p.m.

SCAG Offices
Policy Committee A Conference Room
818 West 7th, 12th Floor
Los Angeles, CA 90017
213.236.1800

Teleconference
Call-in Telephone: (866) 680-0148
Passcode: 357777

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact:

Jonathan Nadler at 213.236.1884 or nadler@scag.ca.gov
Rongsheng Luo at 213.236.1994 or luo@scag.ca.gov

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. If you require such assistance, please contact SCAG at (213) 236-1868 at least 72 hours in advance of the meeting to enable SCAG to make reasonable arrangements. To request documents related to this document in an alternative format, please contact (213) 236-1868.

Transportation Conformity Working Group

AGENDA

				PAGE #	TIME
1.0	**CALL TO ORDER AND SELF-INTRODUCTION**		**Shirley Medina, RCTC**		

2.0 PUBLIC COMMENT PERIOD

Members of the public desiring to speak on an agenda item or items not on the agenda, but within the purview of the TCWG, must fill out a speaker's card prior to speaking and submit it to the Staff Assistant. A speaker's card must be turned in before the meeting is called to order. Comments will be limited to three minutes. The Chair may limit the total time for comments to twenty (20) minutes.

3.0 CONSENT CALENDAR

			Page #	Time
3.1	TCWG Minutes of December 1, 2009 **Attachment**		**3.1-1**	

4.0 INFORMATION ITEMS

			Page #	Time
4.1	Review of PM Hot Spot Interagency Review Forms **Attachment**	**TCWG Discussion**	**4.1-1**	**30 minutes**
4.2	Review of PM Hot Spot Qualitative Analyses **Attachment**	**TCWG Discussion**	**4.2-1**	**15 minutes**
4.3	TCM Substitution Request **Attachment**	**Kurt Brotcke & Anup Kulkarni, OCTA**	**4.3-1**	**15 minutes**
4.4	RTIP Update	**John Asuncion, SCAG**		**5 minutes**
4.5	RTP Update	**Ryan Kuo, SCAG**		**5 minutes**
4.6	SB375 Update	**Jonathan Nadler, SCAG**		**5 minutes**
4.7	ARB Update	**Dennis Wade, ARB**		**5 minutes**
4.8	EPA Update	**Karina O'Connor, EPA**		**5 minutes**
4.9	Air Districts Update Imperial County/Mojave Desert/South Coast/Ventura County	**District Representatives**		**20 minutes**

5.0 INFORMATION SHARING **10 minutes**

6.0 ADJOURNMENT

The next meeting of the Transportation Conformity Working Group will be on Tuesday, February 23, 2010 at the SCAG office in downtown Los Angeles.

TCWG Project-Level
PM Hot Spot Analysis Project Lists

Review of PM Hot Spot Interagency Review Forms

January 2010	Determination
LA0C8086 LA0C8086 Attachment 1 LA0C8086 Attachment 2 LA0C8086 Attachment 3	
LA0D390 LA0D390 Figures	
LA0F030 LA0F030 Figures	
ORA030612 ORA030612 Figures ORA030612 References	
ORA2A0803 ORA2A0803 Figure 1	
SBD200435 SBD200435 Attachment A	

TRANSPORTATION CONFORMITY WORKING GROUP
of the
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

January 26, 2010
Minutes

THE FOLLOWING MINUTES ARE A SUMMARY OF THE MEETING OF THE TRANSPORTATION CONFORMITY WORKING GROUP. AN AUDIOCASSETTE TAPE OF THE ACTUAL MEETING IS AVAILABLE FOR LISTENING IN SCAG'S OFFICE.

The Meeting of the Transportation Conformity Working Group was held at the SCAG office in Los Angeles.

In Attendance:

Abrishami, Lori	LACMTA
Brotcke, Kurt	OCTA
Chyn, Wenn	City of Los Angeles
Holguin, Lee	URS Corporation
Kulkarni, Anup	OCTA
Medina, Shirley	Riverside County Transportation Commission
Moore, Linda	City of Los Angeles
Smolke, Brian	OCTA
Walecka, Carla	TCA

SCAG

Asuncion, John
Luo, Rongsheng
Nadler, Jonathan
Sangkapichai, Mana
Sherwood, Arnie

Via Teleconference:

Brady, Kathleen	Bon Terra Consulting
Brady, Mike	Caltrans Headquarters
Cacatian, Ben	VCAPCD
David, Kris	City of Los Angeles
Drummonds, Eyvonne	SCAQMD
Estrada, Romeo	Caltrans, District 12
Fagan, Paul	Caltrans, District 8
Gallo, Ilene	Caltrans Headquarters
Gardiam, Solush	URS Corporation
Hill, Shannon	ICF International
Jones, Matt	Mestre Greve Associates
Karis, Kutuma	URS Corporation
Mahdavi, Sarvy	EPA Region 9
Morcis, David	RBF consulting

TRANSPORTATION CONFORMITY WORKING GROUP
of the
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

January 26, 2010
Minutes

O'Connor, Karina	U.S. EPA, Region 9
Odufalu, Olufemi	Caltrans, District 8
Tax, Wienke	EPA Region 9
Torres, Eddie	RBF Consulting
Williams, Leann	Caltrans, District 7
Yoon, Andrew	Caltrans, District 7

1.0 CALL TO ORDER

Shirley Medina, RCTC, called the meeting to order at 10:12 a.m.

2.0 PUBLIC COMMENT PERIOD

There were no comments.

3.0 CONSENT CALENDAR

3.1 Approval Item

3.1.1 TCWG December 1, 2009 Meeting Minutes

Clarification: Under Item 4.6 Air Districts Update/VCAPCD, only the motor vehicle emissions budgets of the Ventura County 8-hour Early Progress Plan were found adequate for conformity.

The minutes were approved with the above clarification.

4.0 INFORMATION ITEMS

4.1 Review of PM Hot Spot Interagency Review Forms

1) LA0C8086

It was determined that this is not a POAQC.
(FHWA concurrence was received after the meeting).

2) LA0D390

It was determined that this is not a POAQC.
(FHWA concurrence was received after the meeting).

In response to TCWG comments, the project sponsor will provide additional information to: 1) clarify the relationship between this project and LA0F030 and; and 2) show improvements in overall delay and emissions when combining these two projects.

3) LA0F030

It was determined that this is not a POAQC.
(FHWA concurrence was received after the meeting).

In response to TCWG comments, the project sponsor will provide additional information to: 1) clarify the relationship between this project and LA0D390; and 2) show improvements in overall delay and emissions when combining these two projects.

4) ORA030612

In response to TCWG comments, the project sponsor will provide additional information on emissions from additional stops and starts by diesel commuter trains and an analysis of their impact, if any, on the residents living adjacent to the tracks.

5) ORA2A0803

It was determined that this is not a POAQC.
(FHWA concurrence was received after the meeting).

6) SBD200435

It was determined that this is not a POAQC.
(FHWA concurrence was received after the meeting).

4.2 Review of PM Hot Spot Qualitative Analyses

SBD20061201 I-15/I-215 Interchange

The project sponsor will follow up and address the following TCWG comments:

1. Need additional information, either in the report or cover letter, on which alternative is chosen and its emission reduction. Alternative 3a was suggested as a preferred alternative. Alternatives 2 and 3a are acceptable because they show a design decrease from no project for PM.

2. Sponsor letter head would be sufficient for the additional documentation. If EA already done identifying locally prefer alternative, the document could be used.

3. The locally preferred alternative is acceptable from the emission standpoint based on the report. However, some of alternatives in the report do not reduce emissions

compared to no project. Thus, the judgment would not hold if the alternative will be changed in the future to a different alternative that either increases emissions compared to no project or has not been analyzed.

4.3 TCM Substitution Request

Kurt Brotcke, OCTA, presented an overview of OCTA's request to substitute three TCM projects – the bus rapid transit (BRT) lines on Bristol Street/State College Blvd. (ORA110501), Harbor Blvd. (ORA120531), and Westminster Ave./17th St. (ORA120532) with traffic synchronization projects on the same three corridors. Anup Kulkarni, OCTA, gave a presentation on the methodology and results of the emissions analysis for the proposed TCM substitutions.

In response to comments from TCWG members, OCTA will provide additional information regarding funding and legal authority to implement the substitution TCM projects.

4.4 RTIP Update

John Asuncion, SCAG, reported the following:

- 2011 FTIP submittals were due the week of January 25.
- 2008 RTP Amendment #2/ and 2008 RTIP Amendment #24 were approved on January 22.
- All 2008 RTIP Amendments through #30 have been approved with the only exception of Amendment #28 which was under federal review for approval.
- 2008 RTIP Amendment #31 was also under federal review for approval.
- 2008 RTIP Amendments #32-34 were under analysis by SCAG staff.

4.5 RTP Update

Jonathan Nadler, SCAG, reported the following:

- SCAG received about 300 projects from five County Transportation Commissions (CTCs) for 2008 RTP Amendment #3.
- Staff continued working to get relevant information from CTCs and to perform conformity analyses for the Amendment.
- Staff planned to ask the SCAG Transportation Committee to release the document in February.

4.6 SB 375 Update

Jonathan Nadler, SCAG, reported that SCAG continues its extensive public outreach process.

4.7 ARB UPDATE
No update.

4.8 EPA Update
No update.

4.9 Air Districts Update

SCAQMD
Eyvonne Drummonds, SCAQMD, reported that SCAQMD had submitted to ARB:

1) the PM10 redesignation requests and maintenance plans for South Coast Air Basin (SCAB) and Coachella Valley;
2) revisions to the ozone and PM2.5 motor vehicle emissions budgets for SCAB to reflect mobile source rules recently adopted by ARB through 2008; and
3) revisions to the ozone budgets for Coachella Valley to reflect mobile source rules recently adopted by ARB through 2008.

VCAPCD
No update.

5.0 INFORMATION SHARING

EPA will hold a public hearing for the proposed rule, "Reconsideration of the 2008 National Ambient Air Quality Standards for Ozone." The hearings will be held in Sacramento, California, on Thursday, February 4, 2010.

SCAG welcomed and introduced Mana Sangkapichai as a new air quality and modeling staff member. Mr. Sangkapichai will provide staff support to TCWG as part of his assignments.

6.0 ADJOURNMENT

Shirley Medina adjourned the meeting at 11: 10 a.m.

The next Transportation Conformity Working Group meeting will be held on February 23, 2010 at the SCAG office in Los Angeles.

TCWG Project-Level
PM Hot Spot Analysis Project Lists

Review of PM Hot Spot Interagency Review Forms

January 2010	Determination
LA0C8086 LA0C8086 Attachment 1 LA0C8086 Attachment 2 LA0C8086 Attachment 3	Not a POAQC - Hot Spot analysis not required
LA0D390 LA0D390 Figures	Not a POAQC - Hot Spot analysis not required
LA0F030 LA0F030 Figures	Not a POAQC - Hot Spot analysis not required
ORA030612 ORA030612 Figures ORA030612 References	
ORA2A0803 ORA2A0803 Figure 1	Not a POAQC - Hot Spot analysis not required
SBD200435 SBD200435 Attachment A	Not a POAQC - Hot Spot analysis not required

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Community, Economic and Human Development
Carl Morehouse, Ventura

Energy & Environment
Keith Hanks, Azusa

Transportation
Mike Ten, South Pasadena

MEETING OF THE

TRANSPORTATION CONFORMITY WORKING GROUP

Tuesday, April 27, 2010
10:00 a.m. – 12:00 p.m.

SCAG Offices
Policy Committee A Conference Room
818 West 7th, 12th Floor
Los Angeles, CA 90017
213.236.1800

Teleconference
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Passcode: 357777

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SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. If you require such assistance, please contact SCAG at (213) 236-1868 at least 72 hours in advance of the meeting to enable SCAG to make reasonable arrangements. To request documents related to this document in an alternative format, please contact (213) 236-1868.

Transportation Conformity Working Group

AGENDA

			Page #	Time
1.0	**CALL TO ORDER AND SELF-INTRODUCTION**	**Lisa Poe, SANBAG**		

2.0 PUBLIC COMMENT PERIOD

Members of the public desiring to speak on an agenda item or items not on the agenda, but within the purview of the TCWG, must fill out a speaker's card prior to speaking and submit it to the Staff Assistant. A speaker's card must be turned in before the meeting is called to order. Comments will be limited to three minutes. The Chair may limit the total time for comments to twenty (20) minutes.

3.0 CONSENT CALENDAR

			Page #	Time
3.1	TCWG Minutes of March 23, 2010 **Attachment (3.1-1)**		**3.1-1**	

4.0 INFORMATION ITEMS

			Page #	Time
4.1	Review of PM Hot Spot Interagency Review Forms **Attachment (4.1-1)**	**TCWG Discussion**	**4.1-1**	**30 minutes**
4.2	Proposed TCM Substitution **Attachment (4.2-1)**	**Tony Louka, Caltrans District 8**	**4.2-1**	**15 minutes**
4.3	RTIP Update	**John Asuncion, SCAG**		**5 minutes**
4.4	RTP Update	**Ryan Kuo, SCAG**		**5 minutes**
4.5	Proposed RTP/RTIP Conformity Analysis for the 2006 PM2.5 NAAQS	**Rongsheng Luo, SCAG**	**4.5-1**	**15 minutes**
4.6	SB375 Update	**Jonathan Nadler, SCAG**		**5 minutes**
4.7	ARB Update	**Dennis Wade, ARB**		**5 minutes**
4.8	EPA Update	**Karina O'Connor, EPA**		**5 minutes**
4.9	Air Districts Update	**District Representatives**		**15 minutes**

5.0 INFORMATION SHARING — **10 minutes**

6.0 ADJOURNMENT

The next meeting of the Transportation Conformity Working Group will be on Tuesday, May 25, 2010 at the SCAG office in downtown Los Angeles.

TCWG Project-Level PM Hot Spot Analysis Project Lists

Review of PM Hot Spot Interagency Review Forms

April 2010	Determination
LA0F030	Project sponsor provided additional information in response to TCWG comments. (It was determined that this was not a POAQC at the January 26, 2010 TCWG meeting)
LALS06	Not a POAQC - Hot Spot analysis not required
ORA040602	Not a POAQC - Hot Spot analysis not required
ORA120521	Not a POAQC - Hot Spot analysis not required
SBD20040826 and SBD200619	Not a POAQC - Hot Spot analysis not required
SBD-200622 SBD-200622 Attachment SBD-200622 Figure 1A SBD-200622 Figure 1B SBD-200622 Figure 2	Not a POAQC - Hot Spot analysis not required
SBD-200850	Not a POAQC - Hot Spot analysis not required

RTIP ID# *LA0F030*

TCWG Consideration Date : April 2010

Project Description *(clearly describe project)*

The Build Alternative proposes the following improvements to the C Street interchange. Please refer to the attached figures for project location, project vicinity and the build alternative showing the proposed lane configuration (Figure 1, Figure 2, Figure 3 and Figure 4).

- Replace the two existing intersections (one at C Street/Figueroa Street and the other at John S. Gibson Boulevard/Harry Bridges Boulevard/Figueroa Street) with one new intersection that would align Harry Bridges Boulevard and John S. Gibson Boulevard with the C Street interchange;
- Permanently close access to Figueroa Street from C Street and provide a standard cul-de-sac at the existing intersection;
- Remove the existing northbound I-110 off-ramp and provide a new, more direct off-ramp to eastbound Harry Bridges Boulevard. This would involve widening the Union Oil undercrossing and constructing a new separation structure over John S. Gibson Boulevard;
- Provide a dedicated right-turn lane from the I-110 southbound off-ramp to southbound John S. Gibson Boulevard;
- Provide a dedicated right-turn lane from northbound John S. Gibson Boulevard to eastbound Harry Bridges Boulevard;
- Widen the new intersection to accommodate dual left-turn pockets from westbound Harry Bridges Boulevard to southbound John S. Gibson Boulevard; and
- Use the parcel bounded by I-110, Figueroa Street, and John S. Gibson Boulevard (assessor's parcel number [APN] 7417-001-900) as a construction staging area.

Type of Project *(use Table 1 on instruction sheet)*

Reconfigure existing interchange

County	**Narrative Location/Route & Postmiles**
Los Angeles	The proposed project is located in the community of Wilmington, City of Los Angeles, Los Angeles County, California. The proposed project's construction limits extend north to C Street, south to the D Street undercrossing of the I-110, west to I-110, and east to approximately King Street (Figure 2). **Caltrans Projects – EA 246800**

Lead Agency: California Department of Transportation, District 7

Contact Person	**Phone#**	**Fax#**	**Email**
Andrew Yoon	213-897-6117	213-897-1634	andrew.yoon@dot.ca.gov

Hot Spot Pollutant of Concern *(check one or both)* **PM2.5 X** **PM10 X**

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

Categorical Exclusion (NEPA)	X	**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	**Other**

Scheduled Date of Federal Action:

NEPA Delegation – Project Type *(check appropriate box)*

Excluded	**Section 6004 – NEPA Categorical Exclusions (CEs)**	X	**Section 6005 – All NEPA document types (i.e. CEs, EAs, EIS)**

Current Programming Dates *(as appropriate)*

	PE/Environmental	ENG	ROW	CON
Start	07/01/2008	07/01/2008	N/A	03/01/2012
End	08/30/2009	03/31/2011	N/A	02/28/2015

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*
The purpose of the proposed project is to accomplish the following objectives:

- To improve traffic operations at the C Street/Figueroa Street intersection and reduce vehicular delays, and
- To meet the Department's goal of maximizing the performance and accessibility of transportation systems.

The proposed project is needed to improve the existing poor level of service, non-standard weaving distance, and traffic circulation and operations in the area. The project would bring the I-110/ C Street intersection up to current roadway standards; provide a direct link between the port and the freeway; replace the temporary raised median, which blocks truck access to C Street from the ramps, with a permanent solution; and improve the efficiency of local intersections..

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*
The proposed project is primarily surrounded by Port of Los Angeles (POLA) related uses. There are residences located to the east and north of the project area. Refer to Figure 5, which is attached for the project area and surrounding land uses.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility
The project traffic engineer, Iteris, Inc., provided only northbound ADT along I-110 for all project alternatives and analysis years. According to the project traffic engineers, ADT would not change between the no-build and build alternatives (Iteris 2009a).

Southbound traffic volumes, corresponding to the northbound segments along I-110 analyzed by the project traffic engineers, for existing conditions (2009) were assumed to be the same as 2008 AADT volumes provided by the Caltrans' Traffic Data Branch. This assumption was based on guidance received at the May 7, 2009 Project Development Team (PDT) meeting from Kirk Patel of Caltrans, District 7. In order to obtain southbound I-110 segment AADT, directional splits data from Caltrans' *Peak Hour Volume Data* document was used (California Department of Transportation n.d.). It was assumed that southbound traffic accounted for 41.78 percent of total AADT[1]. Southbound ramp volumes were obtained from Caltrans' Ramp Volumes data (California Department of Transportation n.d.). To obtain southbound AADT for open-to-traffic year (2014) and future design year (2035), growth factors were applied to the extrapolated data. The percentage rate of growth for southbound AADT was assumed to be the same as the percentage rate of growth for the northbound ADT provided by the project traffic engineers. Tables 1 to 6 summarize the growth factors, mainline ADT, on-/off-ramp ADT, mainline truck percentages, on-/off-ramp truck percentages, and LOS for opening-year (2014), respectively.

Table 1. 2014 I-110 Growth Factors

Segment	2008-2014 Growth Percentages
I-110 South of C St Off-Ramp	14.81%
I-110 Off-Ramp to C St	35.39%
I-110 Between C St Off & On Ramps	13.10%
I-110 On-Ramp from C St	8.86%

[1] In the Caltrans' document *Peak Hour Volume Data*, "Dir" indicates the direction of travel for peak volume and "D" stands for D factor, which is the percentage of traffic in the peak direction during the peak hour. 2008 data for I-110 at Post Mile 2.771 was used to determine directional splits. This data indicates that the direction of travel for peak volume is north. The D factor for the a.m. peak hour is 57.57%, and the D factor for the p.m. peak hour is 58.86%. To determine the percentage of southbound traffic, the average of the two D factors was taken. The average (58.22%) was then subtracted from 100% to determine the percentage of southbound traffic (41.78%).

I-110 Between C St On Ramp & Anaheim Off-Ramp	12.54%
Adapted from: Iteris 2009a	

Table 2. 2014 Mainline ADT on I-110

Segment	2014[a]	Truck ADT[b]
I-110 South of C St Off-Ramp	90,775	15,432
I-110 Between C St Off & On Ramps	86,178	14,650
I-110 Between C St On Ramp & Anaheim Off-Ramp	92,967	18,593

Notes:

Mainline AADT was calculated by summing southbound and northbound AADT for each segment.

[a] According to the project traffic engineers, Iteris, Inc., AADT volumes are the same for the build and no-build conditions.

[b] Truck ADT was calculated by multiplying the mainline ADT by the truck percentages in Table 4.

Adapted from: Iteris 2009a; Caltrans 2009n.d.

Table 3. 2014 I-110 On-/Off-Ramp ADT

Ramp	2014[a]	Truck ADT[b]
I-110 Off-Ramp to C St	8,240	1,071
I-110 On-Ramp from C St	8,811	2,996

[a] AADT volumes are the same for the build and no-build conditions.

[b] Truck ADT was calculated by multiplying the ramp ADT by the truck percentages in Table 5.

Adapted from: Iteris 2009a; Caltrans 2009n.d.

Table 4. 2014 Mainline Truck Percentages

Segment	2014[a]
I-110 South of C St Off-Ramp	17%
I-110 Between C St Off & On Ramps	17%
I-110 Between C St On Ramp & Anaheim Off-Ramp	20%

Note:

Truck percentages for southbound traffic were assumed to be the same as truck percentages for northbound traffic.

[a] Truck percentages are the same for the build and no-build conditions.

Adapted from: Iteris 2009a

Table 5. 2014 I-110 On-/Off-Ramp Truck Percentages

Ramp	2014[a]
I-110 Off-Ramp to C St	13%
I-110 On-Ramp from C St	34%

[a] Truck percentages are the same for the build and no-build conditions.

Adapted from: Iteris 2009a

Table 6. 2014 LOS for Build and No Build Project Conditions

2014 No Build				
Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay[a]	LOS	Delay[a]
Figueroa St & I-110 Ramps/C St	F	122.5	F	243.6
Figueroa St/POLA & John S. Gibson Blvd/Harry Bridges Blvd	B	17.9	B	19.0
Average Delay[b]	NA	70.2	NA	131.3
2014 Build				
Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay[a]	LOS	Delay[a]
Figueroa St/John S. Gibson Blvd & Harry Bridges Blvd/I-110 Ramps	B	18.5	C	20.4

Note: The intersections analyzed for build and no-build conditions are not the same because the proposed project would replace the two existing intersections (one at C Street/Figueroa Street and the other at John S. Gibson Boulevard/Harry Bridges Boulevard/Figueroa Street) with one new intersection that would align Harry Bridges Boulevard and John S. Gibson Boulevard with the C Street interchange.

[a] Delay = Average Vehicle Delay in Seconds

[b] Averaging the delay associated with the two no-build intersections to compare the delay with the one build intersection was recommended by the project traffic engineer, Iteris, Inc.

Adapted from: Iteris 2009a; Akkinepally pers. comm.

As shown in Table 6, the two no-build alternative intersections (Figueroa St & I-110 Ramps/C St and Figueroa St/POLA & John S. Gibson Blvd/Harry Bridges Blvd) are represented as one intersection (Figueroa St/John S. Gibson Blvd & Harry Bridges Blvd/I-110 Ramps) under the build alternative. A comparison of intersection delay between the no-build and build alternatives indicates that implementation of the proposed project would result in a substantial improvement in delay at the Figueroa St & I-110 Ramps/C St intersection (122.5 seconds [LOS F] to 18.5 seconds [LOS B] under the AM peak hour and 243.6 seconds [LOS F] to 20.4 seconds [LOS C] under the PM peak hour). At the Figueroa St/POLA & John S. Gibson Blvd/Harry Bridges Blvd intersection, implementation of the proposed project would result in a slight degradation in delay (17.9 seconds [LOS B] to 18.5 seconds [LOS B] under the AM peak hour and 19.0 seconds [LOS B] to 20.4 seconds [LOS C] under the PM peak hour). However, the slight degradation in delay at the Figueroa St/POLA & John S. Gibson Blvd/Harry Bridges Blvd intersection is considered minor when compared to the substantial improvement in delay that would result at the Figueroa St & I-110 Ramps/C St intersection. In addition, when delay is averaged at the two intersections that exist under the no-build alternative and compared to the no-build alternative, the a.m. peak hour delay is reduced from approximately 70.2 seconds to 18.5 seconds, a reduction of 51.7 seconds. Delay for the p.m. peak hour is reduced from approximately 131.3 seconds to 20.4 seconds, a reduction of 110.9 seconds.

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Please refer to the discussion for opening-year above for data extrapolation methods. Tables 7 through 12 summarize the growth factors, mainline ADT, I-110 On-/Off-Ramp ADT, mainline truck percentages, on-/off-ramp truck percentages, and LOS for design year (2035), respectively.

Table 7. 2035 I-110 Growth Factors

Segment	2008-2035 Growth Percentages
I-110 South of C St Off-Ramp	44.15%
I-110 Off-Ramp to C St	55.20%
I-110 Between C St Off & On Ramps	43.23%
I-110 On-Ramp from C St	8.61%

I-110 Between C St On Ramp & Anaheim Off-Ramp	38.67%
Adapted from: Iteris 2009a	

Table 8. 2035 Mainline ADT on I-110

Segment	2035[a]	Truck ADT
I-110 South of C St Off-Ramp	113,975	19,376
I-110 Between C St Off & On Ramps	109,139	19,645
I-110 Between C St On Ramp & Anaheim Off-Ramp	114,552	21,765

Notes:

Mainline AADT was calculated by summing southbound and northbound AADT for each segment.

[a] According to the project traffic engineers, AADT volumes are the same for the build and no-build conditions.

[b] Truck ADT was calculated by multiplying the mainline ADT by the truck percentages in Table 10.

Adapted from: Iteris 2009a; Caltrans 2009n.d.

Table 9. 2035 I-110 On-/Off-Ramp ADT

Ramp	2035[a]	Truck ADT
I-110 Off-Ramp to C St	9,446	945
I-110 On-Ramp from C St	8,791	3,077

[a] AADT volumes are the same for the build and no-build conditions.

[b] Truck ADT was calculated by multiplying the ramp ADT by the truck percentages in Table 11.

[c] Adapted from: Iteris 2009a

Table 10. 2035 Mainline Truck Percentages

Segment	2035[a]
I-110 South of C St Off-Ramp	17%
I-110 Between C St Off & On Ramps	18%
I-110 Between C St On Ramp & Anaheim Off-Ramp	19%

Note:

Truck percentages for southbound traffic were assumed to be the same as truck percentages for northbound traffic.

[a] Truck percentages are the same for the build and no-build conditions.

Adapted from: Iteris 2009a

Table 11. 2035 I-110 On-/Off-Ramp Truck Percentages

Ramp	2035[a]
I-110 Off-Ramp to C St	10%
I-110 On-Ramp from C St	35%

[a] Truck percentages are the same for the build and no-build conditions.

Adapted from: Iteris 2009a

Table 12. 2035 LOS for Build and No Build Project Conditions

2035 No Build				
Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay[a]	LOS	Delay[a]
Figueroa St & I-110 Ramps/C St	F	165.1	F	280.0
Figueroa St/POLA & John S. Gibson Blvd/Harry Bridges Blvd	B	21.5	C	22.8
Average Delay[b]	NA	93.3	NA	151.4
2035 Build				
Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay[a]	LOS	Delay[a]
Figueroa St/John S. Gibson Blvd & Harry Bridges Blvd/I-110 Ramps	C	20.5	C	24.4

Note: The intersections analyzed for build and no-build conditions are not the same because the proposed project would replace the two existing intersections (one at C Street/Figueroa Street and the other at John S. Gibson Boulevard/Harry Bridges Boulevard/Figueroa Street) with one new intersection that would align Harry Bridges Boulevard and John S. Gibson Boulevard with the C Street interchange

[a] Delay = Average Vehicle Delay in Seconds

[b] Averaging the delay associated with the two no-build intersections to compare the delay with the one build intersection was recommended by the project traffic engineer, Iteris, Inc.

Adapted from: Iteris 2009a; Akkinepally pers. comm.

As shown in Table 12, the two no-build alternative intersections (Figueroa St & I-110 Ramps/C St and Figueroa St/POLA & John S. Gibson Blvd/Harry Bridges Blvd) are represented as one intersection (Figueroa St/John S. Gibson Blvd & Harry Bridges Blvd/I-110 Ramps) under the build alternative. A comparison of intersection delay between the no-build and build alternatives indicates that implementation of the proposed project would result in a substantial improvement in delay at the Figueroa St & I-110 Ramps/C St intersection (165.1 seconds [LOS F] to 20.5 seconds [LOS C] under the AM peak hour and 280.0 seconds [LOS F] to 24.4 seconds [LOS C] under the PM peak hour). At the Figueroa St/POLA & John S. Gibson Blvd/Harry Bridges Blvd intersection, implementation of the proposed project would result in a slight degradation in delay (21.5 seconds [LOS B] to 20.5 seconds [LOS C] under the AM peak hour and 22.8 seconds [LOS C] to 24.4 seconds [LOS C] under the PM peak hour). However, the slight degradation in delay at the Figueroa St/POLA & John S. Gibson Blvd/Harry Bridges Blvd intersection is considered minor when compared to the substantial improvement in delay that would result at the Figueroa St & I-110 Ramps/C St intersection. In addition, when delay is averaged at the two intersections that exist under the no-build alternative and compared to the no-build alternative, the a.m. peak hour, delay is reduced from approximately 93.3 seconds to 20.5 seconds, a reduction of 72.8 seconds. Delay for the p.m. peak hour is reduced from approximately 151.4 seconds to 24.4 seconds, a reduction of 127.0 seconds.

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Table 13. 2014 Cross-Street AADT, Percent Trucks, and Truck AADT

Roadway Segment	AADT[a]	% Trucks[b]	Truck AADT[c]
C St East of Figueroa St	0	0%	0
Figueroa St North of I-110 Ramps	9,701	13%	1,261
John S. Gibson Blvd South of I-110 Ramps	14,177	28%	3,970
Harry Bridges Blvd East of Fig St/JSG Blvd	20,074	33%	6,624

[a] According to the project traffic engineers, AADT volumes are the same for the build and no-build conditions.

[b] According to the project traffic engineers, the percentage of trucks is the same for the build and no-build conditions.

c Truck AADT was obtained by multiplying total AADT by the percent trucks.

Source: Iteris 2009b

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Table 14. 2035 Cross-Street AADT, Percent Trucks, and Truck AADT

Roadway Segment	AADT[a]	% Trucks[b]	Truck AADT[c]
C St East of Figueroa St	0	0%	0
Figueroa St North of I-110 Ramps	13,069	12%	1,568
John S. Gibson Blvd South of I-110 Ramps	20,066	29%	5,819
Harry Bridges Blvd East of Fig St/JSG Blvd	22,046	31%	6,834

a According to the project traffic engineers, AADT volumes are the same for the build and no-build conditions.
b According to the project traffic engineers, the percentage of trucks is the same for the build and no-build conditions.
c Truck AADT was obtained by multiplying total AADT by the percent trucks.

Source: Iteris 2009b

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*

The proposed project is part of a group of projects POLA is planning in anticipation of increases in truck traffic at port terminals within the next 25 years in addition to increases in non-commercial traffic due to expected local growth. As a result, freeway interchanges, local roads, and highways near port terminals are expected to reach capacity during peak periods. POLA recognizes that a lack of peak-period capacity is a serious problem and has therefore initiated a number of studies to consider improvements to surrounding facilities. Both SR-47 (Vincent Thomas Bridge) and I-110 and modification on I-110 NB On-Off Ramps Termini at John S. Gibson Blvd (LA0D390) project and C-Street/I-110 interchange improvement project are part of the area wide transportation improvements by POLA and are not dependent upon each other. The future traffic forecasts for the proposed project considered the proposed improvements to SR-47 (Vincent Thomas Bridge) and I-110 and modification on I-110 NB On-Off Ramps Termini at John S. Gibson Blvd for analysis of environmental impacts.

As indicated in Tables 2, 8, 13, and 14, neither mainline nor cross-street AADT is anticipated to change with implementation of the proposed project, as indicated by the project traffic engineers, Iteris, Inc. (Iteris a,b). Although AADT is not anticipated to change, implementation of the proposed project is anticipated to result in a significant reduction in delays at project intersections (Tables 6 and 12). In addition, the proposed project will permanently close access to Figueroa Street from C Street and provide a standard cul-de-sac at the existing intersection. This will prevent trucks from using C Street to access Figueroa Street and I-110 on-ramps; therefore, the proposed project would reduce truck traffic in residential areas.

As indicated in Table 6, implementation of the proposed project would result in a substantial improvement in delay at the Figueroa St & I-110 Ramps/C St intersection (122.5 seconds [LOS F] to 18.5 seconds [LOS B] under the AM peak hour and 243.6 seconds [LOS F] to 20.4 seconds [LOS C] under the PM peak hour). At the Figueroa St/POLA & John S. Gibson Blvd/Harry Bridges Blvd intersection, implementation of the proposed project would result in a slight degradation in delay (17.9 seconds [LOS B] to 18.5 seconds [LOS B] under the AM peak hour and 19.0 seconds [LOS B] to 20.4 seconds [LOS C] under the PM peak hour). However, the slight degradation in delay at the Figueroa St/POLA & John S. Gibson Blvd/Harry Bridges Blvd intersection is considered minor when compared to the substantial improvement in delay that would result at the Figueroa St & I-110 Ramps/C St intersection. In addition, when delay is averaged at the two intersections that exist under the no-build alternative and compared to the no-build alternative, delay for the a.m. peak hour in 2014 is reduced from approximately 70.2 seconds to 18.5 seconds with implementation of the proposed project, a reduction of 51.7 seconds. Delay for the p.m. peak hour in 2014 is reduced from approximately 131.3 seconds to 20.4 seconds with implementation of the proposed project, a reduction of 110.9 seconds.

As indicated in Table 12, the two no-build alternative intersections (Figueroa St & I-110 Ramps/C St and Figueroa St/POLA & John S. Gibson Blvd/Harry Bridges Blvd) are represented as one intersection (Figueroa St/John S. Gibson Blvd & Harry Bridges Blvd/I-110 Ramps) under the build alternative. A comparison of intersection delay between the no-build and build alternatives indicates that implementation of the proposed project would result in a substantial improvement in delay at the Figueroa St & I-110 Ramps/C St intersection (165.1 seconds [LOS F] to 20.5 seconds [LOS C] under the AM peak hour and 280.0 seconds [LOS F] to 24.4 seconds [LOS C] under the PM peak hour). At the Figueroa St/POLA & John S. Gibson Blvd/Harry Bridges Blvd intersection, implementation of the proposed project would result in a slight degradation in delay (21.5 seconds [LOS B] to 20.5 seconds [LOS C] under the AM peak hour and 22.8 seconds [LOS C] to 24.4 seconds [LOS C] under the PM peak hour). However, the slight degradation in delay at the Figueroa St/POLA & John S. Gibson Blvd/Harry Bridges Blvd intersection is considered minor when compared to the substantial improvement in delay that would result at the Figueroa St & I-110 Ramps/C St intersection. In addition, when delay is averaged at the two intersections that exist under the no-build alternative and compared to the no-build alternative, delay for the a.m. peak hour in 2035 is reduced from approximately 93.3 seconds to 20.5 seconds with implementation of the proposed project, a reduction of 72.8 seconds. Delay for the p.m. peak hour in 2035 is reduced from approximately 151.4 seconds to 24.4 seconds with implementation of the proposed project, a reduction of 127.0 seconds.

Comments/Explanation/Details *(attach additional sheets as necessary)*
As shown in Tables 2 and 8, ADT on I-110 is anticipated to exceed the FHWA and EPA's POAQC threshold of 10,000 diesel truck ADT (diesel truck traffic of 8% or more for roadways with 125,000 ADT or more).

However, Tables 4 and 10, which summarize mainline truck percentages for opening- and design-year conditions, respectively, indicate that implementation of the proposed project would not affect diesel truck traffic volumes or percentages between no build and build conditions. Consequently, the build alternative is not considered a POAQC for PM10 and PM2.5 because it would not have an effect on roadway diesel truck traffic volumes or percentages (i.e.,effects to truck percentages are below 5% between the no-build and build alternatives). Because the project is not considered a POAQC, the CAA and 40 CFR 93.116 requirements were met without a hot-spot analysis. The build alternatives have been found to not be of air quality concern under 40 CFR 93.123(b)(1).

References:

Printed References:

California Department of Transportation. n.d. *Welcome to the Traffic Data Branch.* Traffic Volumes: 2008, Ramp Volumes: 2008, Peak Hour Volume Data Report. Available: <http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/index.htm>. Accessed: September 23, 2009.

Federal Highway Administration and U.S. Environmental Protection Agency. 2006. Transportation conformity guidance for qualitative hot-spot analyses in PM2.5 and PM10 nonattainment and maintenance areas. Washington, D.C.

Iteris. 2009a. *I-110 NB/C Street Interchange Improvement Project.* Segment and Intersection Data. Ontario, CA. July 21.

Iteris. 2009b. *Additional Data C_CST_120809.* Cross-Street ADT Data. Ontario, CA. December 8.

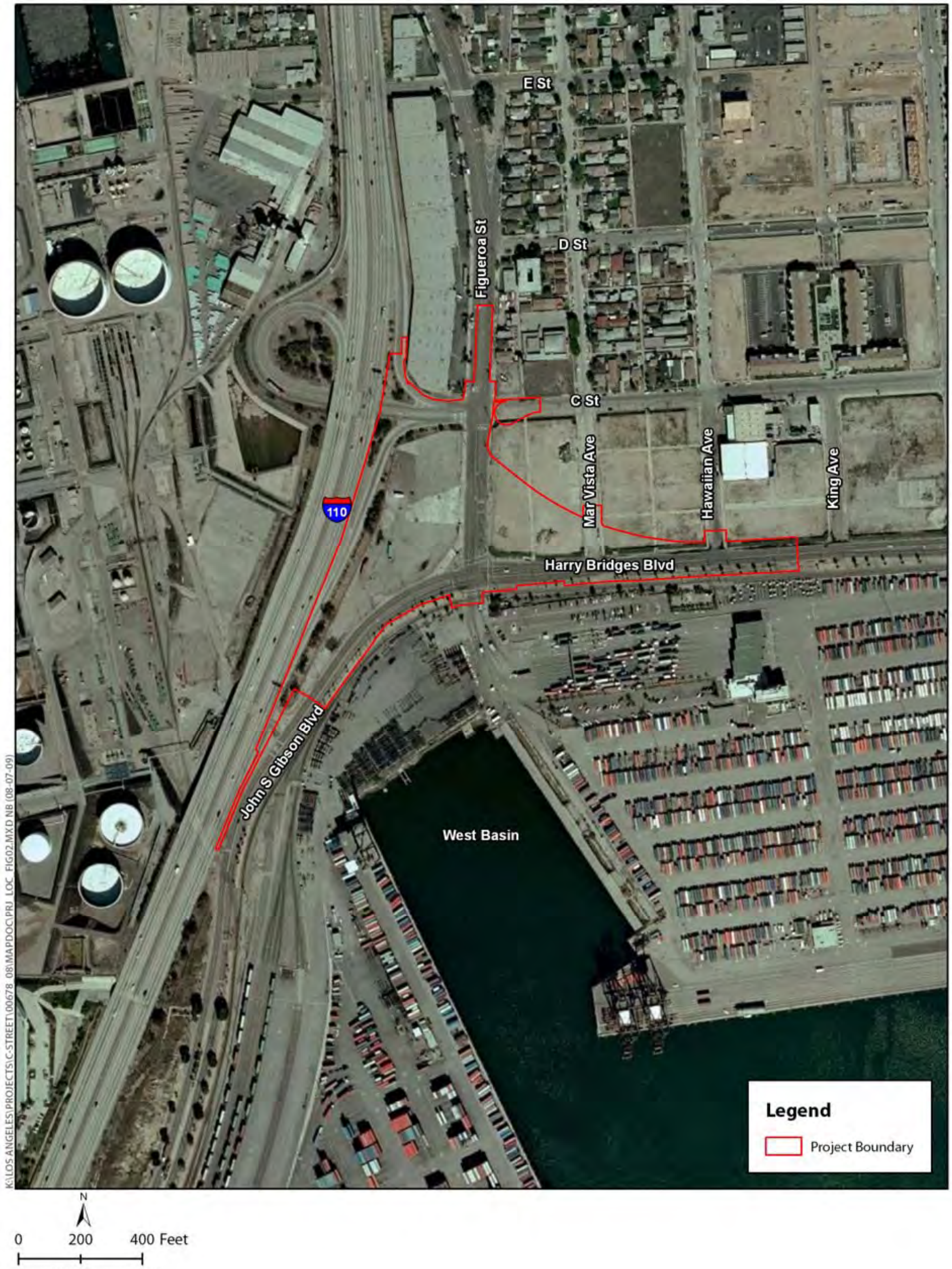
Personal Communications:

Akkinepally, Vamshi. Transportation Engineer. Iteris, Inc., Ontario, CA. December 9, 2009—E-mail transmitting Iteris' responses to Caltrans' comments to ICF International.

Figure 1 Regional Location

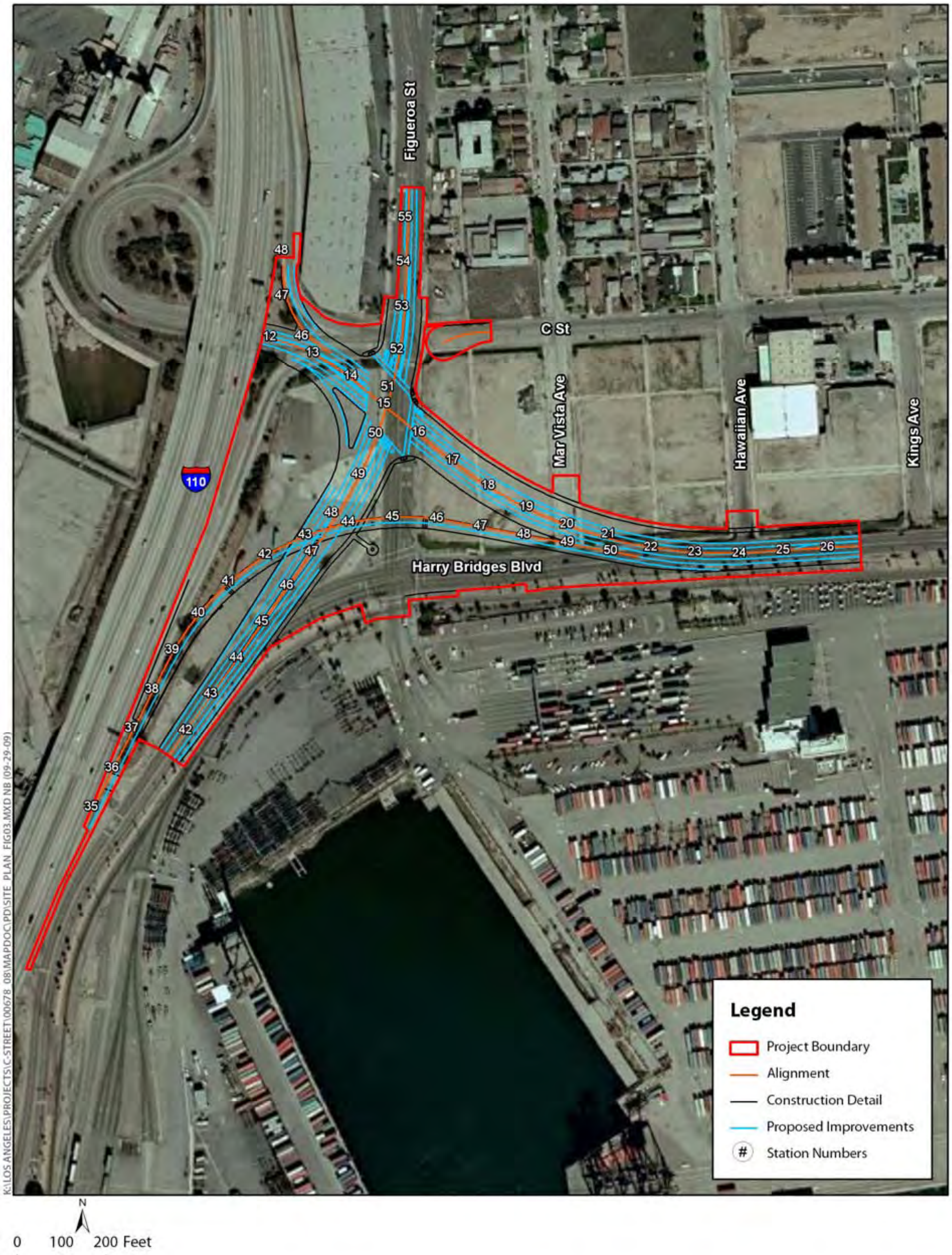
Source: ESRI Streetmap (2008)

Figure 2 Project Vicinity



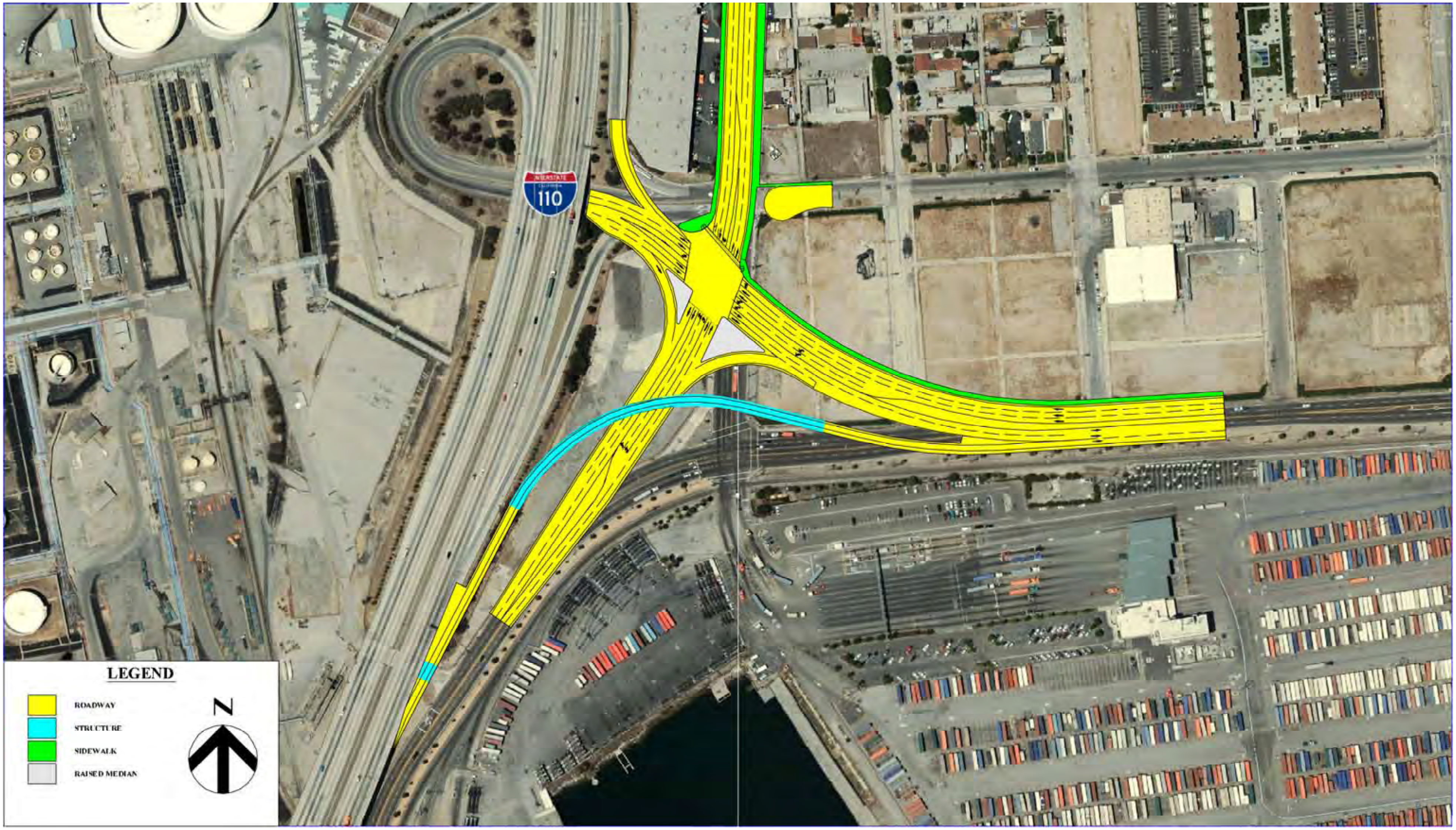
Source: ESRI USA Imagery (2008)

Figure 3 Build Alternative



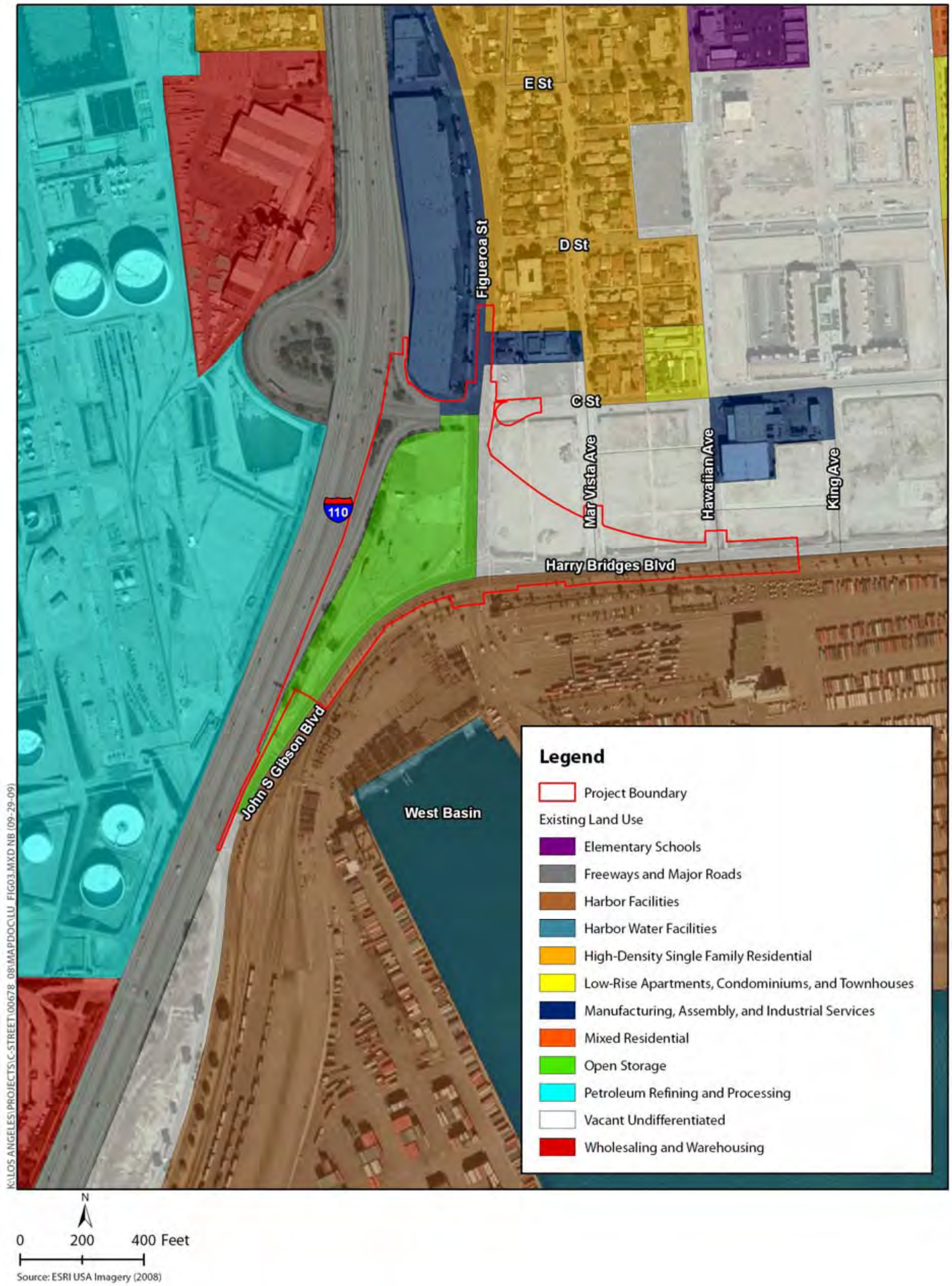
Source: ESRI USA imagery (2008)

Figure 4 Proposed Lane Configuration



Source: California Department of Transportation

Figure 5 Existing Land Use



Appendix H3

Appendix H.3 Impact Analysis Required for POLA as the Responsible Agency

As previously noted in Section 3.1.1, according to the National Environmental Policy Act (NEPA), construction projects lasting less than 5 years are not anticipated to result in any adverse air quality effects. Based on this NEPA determination, the California Department of Transportation (Department) and the Federal Highway Administration (FHWA) do not require quantification of construction emissions for projects lasting less than 5 years. The proposed project is anticipated to start in November 2012 and end in September 2014; therefore, a qualitative analysis of construction emissions was provided in Section 4.2.1.3 to fulfill the Department and FHWA NEPA requirements. However, the Port of Los Angeles (POLA), as the local sponsor and the responsible agency for the proposed project, requires quantitative analysis of construction emissions for all of its projects to meet its California Environmental Quality Act (CEQA) requirements. In addition, the estimated operational emissions summarized in Section 4.2.1.1 are required to be compared against the South Coast Air Quality Management District's (SCAQMD's) operational thresholds (Table 1) to meet POLA's CEQA requirements. Therefore, this appendix addresses POLA's CEQA requirements that are not also required by the Department.

Methodology and Significance Criteria

Criteria Pollutants

Construction

POLA has adopted the SCAQMD thresholds and analysis methodologies to analyze construction impacts from POLA projects. The Department has not adopted SCAQMD's thresholds and analysis methodologies; therefore, this appendix has been included at the request of the POLA. SCAQMD's *CEQA Air Quality Handbook* (AQ Handbook) (1993) is in the process of being updated. Therefore, a combination of the AQ Handbook; SCAQMD's on- and off-road emission factors (2008a, 2008b); SCAQMD's *Final Methodology to Calculate PM2.5 and PM2.5 Significance Thresholds* (PM Guidance) (2006); the U.S. Environmental Protection Agency's (EPA's) AP-42 emission factor equations; the California Air Resources Board's (CARB's) methodology to calculate county-specific emissions inventories, Section 7.9, *Entrained Paved Road Dust, Paved Road Travel* (California Air Resources Board 1997); and construction activity information provided by the project engineer (Shah pers. comm.) (Attachment B1) were used to estimate construction emissions. In addition, SCAQMD has provided updated air quality significance thresholds that became available subsequent to publication of its AQ Handbook. These thresholds will be used to determine significance, according to CEQA, in the environmental document, although no determinations of significance are made in this air quality technical study (AQTS). SCAQMD's significance thresholds are summarized in Table 1, below.

Table 1. SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds		
Pollutant	**Construction**	**Operation**
NO_X	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Pb	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants		
NO_2 1-hour average annual average	0.18 ppm (state) 0.03 ppm (state)	
PM10 24-hour average annual average	10.4 μg/m^3 (construction) & 2.5 μg/m^3 (operation) 1.0 μg/m^3	
PM2.5 24-hour average	10.4 μg/m^3 (construction) & 2.5 μg/m^3 (operation)	
Sulfate 24-hour average	1 μg/m^3	
CO 1-hour average 8-hour average	20 ppm (state) 9.0 ppm (state/federal)	

Notes: lbs/day = pounds per day; ppm = parts per million; μg/m^3 = micrograms per cubic meter; ≥ greater than or equal to; > greater than

Source: South Coast Air Quality Management District 2009.

Using the aforementioned methodologies, construction emissions were estimated for a worst-case day. The worst-case day represents the maximum daily emissions that can reasonably be expected during any phase of construction. The AQ Handbook was used for general calculation guidance; SCAQMD's on- and off-road emission factors were multiplied by construction activity data to estimate emissions from various pieces of equipment. The particulate matter less than or equal to 2.5 microns in diameter (PM2.5) fraction of particulate matter less than or equal to 10 microns in diameter (PM10) was obtained from SCAQMD's PM Guidance, and EPA's AP-42 emission factor equations and CARB's methodology to calculate county-specific emissions inventories were used to calculate entrained road dust.

Operation

The methodology used to calculate operational emissions of criteria pollutants outlined in Section 3.1.2.3 was also used to assess operational emissions for the port.

Greenhouse Gases

Construction

Construction-related greenhouse gas (GHG) emissions were estimated using a combination of formulas and emission factors provided by SCAQMD (South Coast Air Quality Management District 1993, 2008a, 2008b) and the California Climate Action Registry's General Reporting Protocol (version 3.1) (California Climate Action Registry 2009). SCAQMD has compiled emission factors for emissions from on- and off-road construction equipment, including emission factors for carbon dioxide (CO_2) and methane (CH_4). Because emission factors for nitrous oxide (N_2O) are not provided by SCAQMD, construction-related emissions of N_2O were calculated by multiplying calculated CO_2 emissions by a ratio of 0.0000256, which is the ratio of N_2O emissions to CO_2 emissions. Total CO_2 equivalent (CO_2e) emissions were calculated by multiplying CH_4 and N_2O by their respective global warming potentials (GWP). GWPs are multiplied by GHG emissions to express GHGs in units of CO_2e. This is the standard unit of measurement for GHGs. Please refer to Attachment B1, Construction Emissions Calculations, for the calculations used to estimate construction-related GHG emissions.

Operation

Operational emissions of GHG's for the proposed project were analyzed according to the methodology outlined in Section 5.2.1.2. Estimated operational emissions of GHGs are summarized in Section 5.2.2.

Construction Emissions Analysis

Criteria Pollutants

Construction is a source of fugitive dust as well as exhaust emissions, which can have substantial temporary effects on local air quality (i.e., exceed state air quality standards for PM2.5 and PM10). Such emissions would result from earthmoving and the use of heavy equipment as well as land clearing, ground excavation, cut-and-fill operations, and the construction of roadways. Dust emissions can vary substantially from day to day, depending on the level of activity, the specific operations, and the prevailing weather.

Table 2 summarizes estimated peak daily construction emissions associated with the proposed project, and Attachment B1 includes the construction activity data and construction emission calculation sheets.

Table 2. Estimated Peak Daily Construction Emissions (pounds/day)

		ROG	CO	NO_X	SO_X	PM10	PM2.5[a, c]
2012							
Off Road	Grubbing/Land Clearing	9.56	30.73	79.87	0.10	3.47	0.73
	Grading/Excavation	13.12	41.82	122.35	0.16	4.63	0.98
	Drainage/Utilities/Sub-grade	–	–	–	–	–	–
	Paving	–	–	–	–	–	–
On Road	Soil Hauling[b,c]	1.52	6.13	18.55	0.02	1.08	0.78
	Employee Trips[c]	0.67	6.43	0.65	0.01	0.20	0.05
Maximum Daily Occurrence		***15.31***	***54.38***	***141.55***	***0.19***	***5.91***	***1.81***
SCAQMD Thresholds		***75***	***550***	***100***	***150***	***150***	***55***
Exceeds Threshold?		***No***	***No***	***Yes***	***No***	***No***	***No***
2013							
Off Road	Grubbing/Land Clearing	–	–	–	–	–	–
	Grading/Excavation	12.48	40.55	112.66	0.16	4.22	0.90
	Drainage/Utilities/Subgrade	–	–	–	–	–	–
	Paving	–	–	–	–	–	–
On Road	Soil Hauling[b,c]	1.36	5.59	16.46	0.02	0.98	0.69
	Employee Trips[c]	0.63	5.96	0.60	0.01	0.20	0.05
Maximum Daily Occurrence		***14.47***	***52.09***	***129.72***	***0.19***	***7.07***	***1.93***
SCAQMD Thresholds		***75***	***550***	***100***	***150***	***150***	***55***
Exceeds Threshold?		***No***	***No***	***Yes***	***No***	***No***	***No***
2014							
Off Road	Grubbing/Land Clearing	–	–	–	–	–	–
	Grading/Excavation	11.83	39.52	102.27	0.16	3.84	0.81
	Drainage/Utilities/Subgrade	6.47	22.16	47.24	0.06	2.55	0.54
	Paving	3.99	12.04	31.97	0.05	1.26	0.27
On Road	Soil Hauling[c]	0.81	3.39	9.67	0.02	0.65	0.40
	Employee Trips[c]	0.59	5.55	0.55	0.01	0.16	0.05
Maximum Daily Occurrence		***13.23***	***48.45***	***112.50***	***0.18***	***4.65***	***1.26***
SCAQMD Thresholds		***75***	***550***	***100***	***150***	***150***	***55***
Exceeds Threshold?		***No***	***No***	***Yes***	***No***	***No***	***No***

Table 2 Notes:
Please refer to Attachment B1 for construction equipment information and emissions calculations. [a] For off-road emissions, the PM2.5 fraction of PM10 was assumed to be 0.212, which is CARB's fraction for unpaved road fugitive dust. This is a worst-case-scenario, because construction equipment will be operating on paved and unpaved areas. For on-road emissions, the PM2.5 fraction of PM10 was assumed to be 0.169, which is CARB's fraction for paved road fugitive dust. [b] Assumed export and import overlap for the first 9 months; 2012 and 2013 emissions reflect trips associated with both importation and exportations. [c] To calculate entrained dust, the following formula was used: road emissions (pounds particulate matter/day) = E * road vehicle miles traveled (VMT). EPA's AP-42 Empirical Expression: E = k(sL/2)0.65 x (W/3)1.5 - C, where E = particulate emission factor (having units matching the units of k), k = particle size multiplier for particle size range and units of interest, sL = road surface silt loading (grams per square meter) (g/m^2), W = average weight (tons) of the vehicles traveling the road, and, C = emission factor for 1980s vehicle fleet exhaust, brake wear, and tire wear k for PM10 = 0.016, k for PM2.5 = 0.0024 C for PM10 = 0.00047 pound/VMT, and C for PM2.5 = 0.00036 pound/VMT According to Table 3 of ARB's methodology, sL for major roads in Los Angeles County = 0.037 g/m2; sL for freeways in Los Angeles County = 0.020 g/m2, and; W for Los Angeles County = 2.7 tons. According to EPA's AP-42 Section 13.2.1 document for calculating entrained paved road dust, there may be situations where low silt loading and/or low average vehicle weight will yield calculated negative emissions from EPA's Emission Factor Formula equation above. If this occurs, the emissions calculated from the equation should be set to zero. Calculated PM2.5 emissions were negative; therefore, PM2.5 emissions were set to zero. ROG = reactive organic gases; CO = carbon monoxide; NO_X = oxides of nitrogen; SO_X = sulfur oxides. Sources: California Air Resources Board 1997; South Coast Air Quality Management District 1993, 2006, 2008a, 2008b; U.S. Environmental Protection Agency 2006.

Greenhouse Gases

Construction GHG emissions include emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase. Table 3 summarizes estimated construction-related GHG emissions.

Table 3. Estimated Construction-related Emissions of Greenhouse Gases (metric tons/year)

		CO_2	**CH_4**	**N_2O**	**CO_2e**
2012					
Off Road	Grubbing/Land Clearing	95.89	0.01	0.00	96.83
	Grading/Excavation	154.49	0.01	0.00	155.96
	Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00
	Paving	0.00	0.00	0.00	0.00
On Road	Soil Hauling[a]	100.97	0.00	0.00	101.83
	Employee Trips	18.47	0.00	0.00	18.64
Total		***369.81***	***0.02***	***0.01***	***373.26***

		CO_2	CH_4	N_2O	CO_2e
2013					
Off Road	Grubbing/Land Clearing	0.00	0.00	0.00	0.00
	Grading/Excavation	1,853.82	0.13	0.05	1,871.38
	Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00
	Paving	0.00	0.00	0.00	0.00
On Road	Soil Hauling[a]	479.52	0.01	0.01	483.58
	Employee Trips	110.74	0.01	0.00	111.76
Total		***2,444.08***	***0.15***	***0.06***	***2,466.71***
2014					
Off Road	Grubbing/Land Clearing	0.00	0.00	0.00	0.00
	Grading/Excavation	154.49	0.01	0.00	155.94
	Drainage/Utilities/Subgrade	289.67	0.03	0.01	292.58
	Paving	131.36	0.01	0.00	132.63
On Road	Soil Hauling[a]	0.00	0.00	0.00	0.00
	Employee Trips	83.18	0.00	0.00	83.94
Total		***658.69***	***0.06***	***0.02***	***665.09***

Note: Please refer to Attachment B1 for construction equipment information and emissions calculations.

[a] Assumed export and import overlap for the first 9 months; 2012 and 2013 emissions reflect trips associated with both importation and exportation.

Sources: California Climate Action Registry 2009; South Coast Air Quality Management District 2008a, 2008b.

Toxic Air Contaminants

The greatest potential for toxic air contaminant (TAC) emissions associated with the proposed project would result from diesel particulate emissions associated with heavy equipment. CARB identified diesel exhaust as a TAC in 1998 (California Air Resources Board 2000). According to SCAQMD methodology, health effects from carcinogenic TACs are usually described in terms of individual cancer risk, which is based on a 70-year lifetime exposure to TACs. Because construction is anticipated to last for only 23 months (November 2012 to September 2014), the proposed project would not result in a long-term source of TAC emissions. In addition, as discussed in Section 2.1.1.1, while naturally occurring asbestos (NOA) is common in certain counties of California, it is not likely to be found in Los Angeles County (California Department of Conservation 2000).

Odors

Odor impacts are associated with odor-generating facilities as well as sensitive receptors that would be located near existing odor-generating facilities. Some examples of odor-generating facilities are wastewater treatment facilities, landfills, composting facilities, petroleum refineries, dairies, food processing facilities, and the like. Because the proposed project would not be considered an odor-generating facility, nuisance odors are not anticipated to occur.

Operational Emissions

Daily operational emissions of criteria pollutants and CO_2 are summarized in Table 4-8 in Section 4.2.1.1. In addition to the operational emissions analysis presented in Section 4.2.1.1, reduced regional emissions due to improvements in vehicular delay from POLA's Synchro modeling results were incorporated into the 2035 analysis (i.e., subtracted from calculated CT-EMFAC/VMT and EMFAC2007/idling emissions[1]) based on direction from POLA. Table 4-7 in Section 4.2.1.1 presents regional emissions reductions from the POLA's Synchro modeling results, while Table 4 summarizes total project emissions, including emissions associated with CT-EMFAC/VMT and EMFAC2007/idling, as well as emission reductions from the POLA's Synchro modeling.

[1] Emissions benefits under existing (2008) and interim (2014) years was unavailable, in addition to PM10, PM2.5, and CO_2.

Table 4. Summary of Daily Operational Emissions (pounds/day)

Scenario	Daily VMT	ROG[a]	NO_X	CO	PM10[b]	PM2.5[b]
2008	21,217	11.625	67.395	165.837	8.351	1.947
2014 No Build	27,230	15.681	114.268	169.257	10.808	2.582
2014 Build	25,152	9.127	56.551	127.619	9.471	1.916
2035 No Build	34,756	12.134	107.207	110.645	12.296	1.909
2035 Build	32,528	-29.125 [c]	-2.127 [c]	-82.262 [c]	11.233	1.532
Alternative Differences						
Scenario	**Daily VMT**	**ROG[a]**	**NO_X**	**CO**	**PM10**	**PM2.5**
2014 Build - 2014 No Build	-2,078	-6.555	-57.717	-41.638	-1.336	-0.666
2035 Build - 2035 No Build	-2,228	-41.258	-109.33	-192.90	-1.06	-0.38

[a] CT-EMFAC does not calculate ROG, only TOG. Therefore, emissions of ROG were calculated from CT-EMFAC estimated TOG emissions by multiplying these TOG emissions by the ratio of ROG to TOG obtained from EMFAC 2007.

[b] Calculations of entrained dust are included and were performed according to the emission factor equation found in EPA's Compilation of Air Pollutant Emission Factors, AP-42 Section 13.2.1, was used:

Road Emissions (pounds/day) = Daily VMT * Emission Factor (E)

U.S. EPA Emission Factor Formula: E = [k(sL/2)^0.91 x (W)^1.02] x (1-P/4N), where E = particulate emission factor (having units matching the units of k), k = particle size multiplier for particle size range and units of interest, sL = roadway silt loading (g/m2), W = average weight of vehicles traveling the road (tons), P = number of wet days with at least 0.254mm (0.01 inches) of precipitation, and N = number of days in the averaging period.

k for PM10 = 0.0022 pound/VMT; k for PM2.5 = 0.00054 pound/VMT; sL for Los Angeles County = 0.037 g/m2; W for Los Angeles County = 2.7 tons; C = 40 days/year; N = 365 days.

According to Table 3 of ARB's methodology, sL for major roads in Los Angeles County = 0.037 g/m2; sL for freeways in Los Angeles County = 0.020 g/m2, and; W for Los Angeles County = 2.7 tons. As indicated in Table 3-6 in Chapter 3, the VMT provided by the traffic engineers includes both freeway links and major links according to CARB standards. Since the VMT by 5 mph speed bin breakdown provided by the traffic engineers does not indicate which links the VMT is associated with the sL for major roads was used as a worst-case-scenario.

[c] Includes emissions savings associated with total reductions in vehicle delay.

Sources: California Air Resources Board 1997; U.S. Environmental Protection Agency 2011; Iteris 2011.

Table 4 indicates that project emissions, when accounting for the emission reductions associated with the POLA's Synchro modeling, are net negative for ROG, NO_X, and CO in 2035, which is the only year which POLA's Synchro modeling is available. In addition, to PM10, PM2.5, and CO_2 emissions are not available from POLA's Synchro modeling. As shown in Table 4, no SCAQMD operational thresholds (Table 1) would be exceeded with implementation of the Build Alternative; therefore, no minimization measures are required.

Avoidance/Minimization Measures

Compliance with the minimization measures outlined in Section 4.2.1.4 would reduce emissions of criteria pollutants, especially PM10 and PM2.5. In addition, as shown in Table 2, maximum daily construction emissions of NO_X would exceed SCAQMD's threshold by 41.55 pounds per day in 2012, 29.72 pounds per day in 2013, and 12.50 pounds per day in 2014; therefore, additional minimization measures will be required to reduce NO_X emissions below the SCAQMD threshold of 100 pounds per day. POLA employs a set of best management practices (BMPs), which are anticipated to reduce construction emissions of NO_X below the SCAQMD threshold. These BMPs are listed below.

On-road Trucks

1) Trucks hauling material such as debris or any fill material will be fully covered while operating off port property.
2) Idling will be restricted to a maximum of 5 minutes when not in use.
3) EPA Standards:
   a. <u>On-road Trucks *Except* for Import Haulers and Earthmovers</u>:
      1) Prior to December 31, 2011: All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used at the Port of Los Angeles will comply with EPA 2004 on-road emission standards for PM10 and NO_X (0.10 gram per brake horsepower-hour [g/bhp-hr] and 2.0 g/bhp-hr, respectively).
      2) From January 1, 2012 on: All on-road heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used at the Port of Los Angeles will comply with EPA 2007 on-road emission standards for PM10 and NO_X (0.01 g/bhp-hr and at least 1.2 g/bhp-hr, respectively).

   b. <u>For Import Hauler[i] Only</u>:
      1) Prior to December 31, 2011: All on-road heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used to move dirt to and from the construction site via public roadways at the Port of Los Angeles will comply with EPA 1998 on-road emission standards for PM10 and NO_X (0.10 g/bhp-hr and 4.0 g/bhp-hr, respectively). In addition, such trucks shall be equipped with a CARB-verified Level 3 device.
      2) From January 1, 2012 on: All on-road heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used to move dirt to and from the construction site via public roadways at the Port of Los Angeles will comply with EPA 2004 on-road emission standards for PM10 and NO_X (0.10 g/bhp-hr and 2.0 g/bhp-hr, respectively).

c. For Earthmovers[ii] Only:

1) Prior to December 31, 2011: All heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used to move dirt within the construction site at the Port of Los Angeles will comply with EPA 1998 on-road emission standards for PM10 and NO_X (0.10 g/bhp-hr and 4.0 g/bhp-hr, respectively).
2) From January 1, 2012 on: All heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used to move dirt within the construction site at the Port of Los Angeles will comply with EPA 2004 on-road emission standards for PM10 and NO_X (0.10 g/bhp-hr and 2.0 g/bhp-hr, respectively).

A copy of each unit's certified EPA rating and each unit's CARB or SCAQMD operating permit will be provided at the time of mobilization of each applicable unit of equipment.

Construction Equipment (excluding On-road Trucks)

1) Construction equipment will incorporate, where feasible, emissions-savings technology such as hybrid drives and specific fuel economy standards.
2) Idling will be restricted to a maximum of 5 minutes when not in use.
3) Equipment Engine Specifications:

   a. Prior to December 31, 2011: All off-road diesel-powered construction equipment greater than 50 horsepower (hp), except marine vessels and harbor craft, will meet Tier 2 off-road emission standards, at a minimum. In addition, all construction equipment greater than 50 hp will be retrofitted with a CARB-verified Level 3 Diesel Emissions Control System (DECS).

   b. From January 1, 2012, to December 31, 2014: All off-road diesel-powered construction equipment greater than 50 hp, except marine vessels and harbor craft, will meet Tier 3 off-road emission standards, at a minimum. In addition, all construction equipment greater than 50 hp will be retrofitted with a CARB-verified Level 3 DECS.

   c. From January 1, 2015 on: All off-road diesel-powered construction equipment greater than 50 hp, except marine vessels and harbor craft, will meet Tier 4 off-road emission standards, at a minimum.

   The above equipment engine specifications shall be met unless one of the following circumstances exists and the contractor provides proof that the circumstance exists:

   - A piece of specialized equipment is unavailable as specified in 3(a), 3(b), or 3(c) within 200 miles of the Port of Los Angeles, including through a leasing agreement. If this circumstance exists, the equipment must comply with one of the options contained in the Step Down Schedule, as shown in Table 4, below. At no time shall equipment meet less than a Tier 1 engine standard with a CARB-verified Level 2 DECS; or

- The availability of construction equipment shall be reassessed in conjunction with the years listed in the above tier specifications (prior to December 31, 2011, from January 1, 2012, and from January 15, 2015) on an annual basis. For example, if a piece of equipment is not available prior to December 31, 2011, the contractor shall reassess this availability on January 1, 2012.

Table 4: Compliance Step Down Schedule

Compliance Alternative	Engine Standard	CARB-verified DECS	Particulate Matter Emissions* (g/bhp-hr)	NO_X Emissions (g/bhp-hr)
1	Tier 4	N/A	0.01	0.3
2	Tier 3	Level 3	0.02	2.9
3	Tier 2	Level 3	0.02	4.7
4	Tier 1	Level 3	0.06	6.9
5	Tier 2	Level 2	0.08	4.7
6	Tier 2	Level 1	0.11	4.7
7	Tier 2	Uncontrolled	0.15	4.7
8	Tier 1	Level 2	0.2	6.9
Equipment less than Tier 1, Level 2 shall not be permitted				
*Stated emissions levels are for engine horsepower ratings of 176 bhp and above. Emissions levels for engine bhp ratings below 176 hp are marginally higher (.02–.08 g/bhp-hr depending on hp, tier, and DECS level).				

Fugitive Dust Control

SCAQMD Rule 403 requires a fugitive dust control plan to be prepared and approved for construction sites. Construction contractors are required to obtain a 403 Permit from SCAQMD prior to construction.

The measures listed below to reduce dust should be included in the contractor’s fugitive dust control plan, at a minimum.

- SCAQMD’s best available control technology (BACT) measures, as outlined in Table 1 of Rule 403, shall be followed on all projects. Large construction projects (on a property with 50 or more disturbed acres) shall also follow Rule 403, Tables 2 and 3.
- Active grading sites shall be watered three times per day.
- Contractors shall apply approved non-toxic chemical soil stabilizers to all inactive construction areas or replace groundcover in disturbed areas.

- Contractors shall provide temporary wind fencing around sites being graded or cleared.
- Trucks hauling dirt, sand, or gravel shall be covered or shall maintain at least 2 feet of freeboard in accordance with Section 23114 of the California Vehicle Code (Spilling Loads on Highways).
- Construction contractors shall install wheel washers where vehicles travel from unpaved roads onto paved roads or wash off tires of vehicles and any equipment leaving the construction site.
- The grading contractor shall suspend all soil disturbance activities when winds exceed 25 mph or when visible dust plumes emanate from a site; disturbed areas shall be stabilized if construction is delayed.
- Open storage piles (greater than 3 feet tall and a total surface area of 150 square feet) shall be covered with a plastic tarp or chemical dust suppressant.
- Materials shall be stabilized the while loading, unloading, and transporting to reduce fugitive dust emissions.
- Seals on belly dump trucks shall be checked regularly to remove trapped rocks and prevent possible spillage.
- Compliance with track-out regulations shall be required, and water shall be provided while loading and unloading to reduce visible dust plumes.
- Waste materials shall be hauled off site immediately.
- Roads and road shoulders shall be paved where available.
- Traffic speeds on all unpaved roads shall be reduced to 15 mph or less.
- Temporary traffic controls, such as a flagperson, shall be provided during all phases of construction to maintain smooth traffic flow.
- Construction activities that would affect traffic flow on the arterial system shall be scheduled during off-peak hours to the extent practicable.
- Pursuant to SCAQMD Rule 1186 and Rule 1186.1, certified street sweepers shall be required. Sweep streets at the end of each day if visible soil is carried onto paved roads on site or roads adjacent to the site to reduce fugitive dust emissions.
- A construction relations officer shall be appointed to act as a community liaison concerning on-site construction activity, including resolution of issues related to PM10 generation.

Electricity Use

- Electricity supplied by a public utility shall be used where available on the construction sites in lieu of temporary diesel- or gasoline-powered generators.

Best Management Practices

The following types of measures are required on construction equipment (including on-road trucks):

1) Use diesel oxidation catalysts and catalyzed diesel particulate traps;
2) Maintain equipment according to manufacturers' specifications;
3) Restrict idling of construction equipment and on-road heavy-duty trucks to a maximum of 5 minutes when not in use;
4) Install high-pressure fuel injectors on construction equipment vehicles;
5) Maintain a minimum buffer zone of 300 meters between truck traffic and sensitive receptors;
6) Improve traffic flow by signal synchronization;
7) Enforce truck parking restrictions;
8) Provide on-site services to minimize truck traffic in or near residential areas, including the following services: meal or cafeteria services, automated teller machines, etc.;
9) Re-route construction trucks away from congested streets or sensitive receptor areas;
10) Provide dedicated turn lanes for the movement of construction trucks and equipment on and off site; and
11) Use electric power in favor of diesel power where available.

The Los Angeles Harbor Department (LAHD) shall implement a process by which to select additional BMPs to reduce air emissions further during construction. LAHD shall determine the BMPs once the contractor identifies and secures a final equipment list.

Special Precautions near Sensitive Sites

For construction activities that occur within 1,000 feet of sensitive receptors (defined as schools, playgrounds, day care centers, and hospitals), LAHD shall notify each site in writing at least 30 days before construction activities begin.

Recycling of Construction Materials

Demolition and/or excess construction materials shall be separated on site for reuse/recycling or proper disposal. During grading and construction, separate bins for recycling of construction materials shall be provided on site.

Materials with Recycled Content

Materials with recycled content shall be used in project construction. Chippers on site during construction shall be used to reduce excess wood further for landscaping cover.

[i] Import haulers are defined as all trucks hauling dirt to and from the construction site via public roadways.
[ii] Earthmovers are defined as all trucks moving and/or working in dirt within the construction site (i.e., the trucks are confined to the construction site and do not regularly enter or exit public roadways).

Onroad Criteria Pollutant Emissions Summary

	ROG	CO	NOX	SOX	PM10	PM2.5
	2012					
Soil Hauling	1.516585	6.129117	18.55427	0.024253953	1.077722	0.776127
Employee Trips	0.668874	6.429987	0.651696	0.009011566	0.204229	0.048296
	2013					
Soil Hauling	1.357848	5.590739	16.45761	0.024514811	0.982505	0.687777
Employee Trips	0.62636	5.957518	0.597724	0.009003688	0.204964	0.04901
	2014					
Soil Hauling	0.806375	3.385742	9.672195	0.016368727	0.654158	0.402326
Employee Trips	0.589911	5.546968	0.550068	0.008982011	0.163023	0.049885

	2012		2013												2014								
Phase	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**
Grubbing/Land Clearing	X																						
Grading/Excavation		X	X	X	X	X	X	X	X	X	X	X	X	X	X								
Drainage/Utilities/Sub-Grade																X	X	X	X	X			
Paving																					X	X	X

Phase and Equipment					2012 Emissions (pounds/day)						
Grubbing/Land Clearing	Number	Hours/Day	Avg HP	HP Used[a]	ROG	CO	NOX	SOX	PM	CO2	CH4
Dozer	1	6	84	175	1.32539	5.116721	9.78268	0.008741	0.566932	776.8604	0.119588
Water Truck[b]	1	8	400	500	1.810355	5.328734	15.57079	0.021384	0.56432	2178.671	0.163345
Dump Truck[b]	2	8	485	500	3.620711	10.65747	31.14158	0.042769	1.128641	4357.342	0.326691
Blade[c]	1	8	215	250	1.893991	5.35938	17.47907	0.018855	0.687149	1675.763	0.170892
Loader/Backhoe	2	6	125	120	0.912499	4.268503	5.892302	0.007282	0.518428	620.7361	0.082333
				Total	9.562947	30.73081	79.86642	0.099031	3.465471	9609.372	0.862849

Phase and Equipment					2012 Emissions (pounds/day)							2013 Emissions (pounds/day)							2014 Emissions (pounds/day)						
Grading/Excavation	Number	Hours/Day	Avg HP	HP Used[a]	ROG	CO	NOX	SOX	PM	CO2	CH4	ROG	CO	NOX	SOX	PM	CO2	CH4	ROG	CO	NOX	SOX	PM	CO2	CH4
Dozer	1	6	84	175	1.32539	5.116721	9.78268	0.008741	0.566932	776.8604	0.119588	1.271621	5.07425	9.33639	0.008741	0.535615	776.8608	0.114736	1.220119	5.035243	8.912414	0.008741	0.504661	776.8606	0.110089
Water Truck[b]	2	8	400	500	3.620711	10.65747	31.14158	0.042769	1.128641	4357.342	0.326691	3.471281	10.17904	28.58406	0.042769	1.013619	4357.342	0.313208	3.304693	9.814886	25.51268	0.042769	0.907333	4357.343	0.298177
Blade[c]	1	8	215	250	1.893991	5.35938	17.47907	0.018855	0.687149	1675.763	0.170892	1.801989	5.126756	16.38487	0.018855	0.632564	1675.762	0.162591	1.708214	4.916425	15.14894	0.018855	0.580881	1675.762	0.154129
Excavator	2	8	450	500	2.887771	8.788718	25.77882	0.036707	0.918477	3739.767	0.260559	2.77573	8.433603	23.62067	0.036707	0.825783	3739.767	0.25045	2.650515	8.163306	21.00269	0.036707	0.740979	3739.766	0.239152
Drill Rig	1	4	1500	1000	1.79625	6.70932	26.44937	0.037335	0.679436	3713.131	0.162073	1.665242	6.669916	23.82135	0.037335	0.617517	3713.13	0.150252	1.555696	6.636553	21.63678	0.037335	0.564201	3713.131	0.140368
Crane	1	4	275	250	0.441197	1.24109	4.284852	0.005048	0.155326	448.6355	0.039808	0.416135	1.179111	3.979006	0.005048	0.140368	448.6355	0.037547	0.391775	1.126742	3.635264	0.005048	0.126712	448.6354	0.035349
Roller	1	4	107	120	0.421784	1.639267	2.647731	0.002768	0.229748	235.955	0.038057	0.394422	1.625214	2.501266	0.002768	0.213435	235.955	0.035588	0.368401	1.612088	2.362445	0.002768	0.197448	235.955	0.03324
Tool Truck[b]	1	2	320	250	0.29378	0.788837	2.702645	0.003748	0.092102	333.0907	0.026507	0.279944	0.767325	2.474616	0.003748	0.082475	333.0908	0.025259	0.265118	0.752278	2.209625	0.003748	0.073699	333.0908	0.023921
Generator	1	2	100	120	0.241193	0.991192	1.619734	0.001829	0.128092	155.8988	0.021762	0.221241	0.981061	1.517484	0.001829	0.118013	155.8988	0.019962	0.201542	0.971305	1.426028	0.001829	0.107466	155.8989	0.018185
Compressor	1	2	40	50	0.201939	0.529209	0.461929	0.000576	0.04774	44.54253	0.018221	0.184119	0.509133	0.444183	0.000576	0.044033	44.54253	0.016613	0.16612	0.48917	0.426742	0.000576	0.040247	44.54252	0.014989
				Total	13.12401	41.8212	122.3484	0.158375	4.633644	15480.99	1.184158	12.48172	40.54541	112.6639	0.158375	4.223422	15480.98	1.126206	11.83219	39.518	102.2736	0.158375	3.843626	15480.98	1.0676

Phase and Equipment					2014 Emissions (pounds/day)						
Drainage/Utilities/Sub-Grade	Number	Hours/Day	Avg HP	HP Used[a]	ROG	CO	NOX	SOX	PM	CO2	CH4
Water Truck[b]	1	8	400	500	1.652346	4.907443	12.75634	0.021384	0.453666	2178.672	0.149089
Blade[c]	1	8	215	250	1.708214	4.916425	15.14894	0.018855	0.580881	1675.762	0.154129
Loader/Backhoe	1	6	125	120	0.380521	2.101774	2.551192	0.003641	0.201991	310.3681	0.034334
Paving Machine	2	8	121	120	2.097313	8.017573	12.71728	0.012987	1.091847	1107.143	0.189237
Tool Truck[b]	1	2	320	250	0.265118	0.752278	2.209625	0.003748	0.073699	333.0908	0.023921
Generator	1	2	100	120	0.201542	0.971305	1.426028	0.001829	0.107466	155.8989	0.018185
Compressor	1	2	40	50	0.16612	0.48917	0.426742	0.000576	0.040247	44.54252	0.014989
				Total	6.471174	22.15597	47.23614	0.06302	2.549798	5805.476	0.583884

Phase and Equipment					2014 Emissions (pounds/day)						
Paving	Number	Hours/Day	Avg HP	HP Used[a]	ROG	CO	NOX	SOX	PM	CO2	CH4
Water Truck[b]	1	8	400	500	1.652346	4.907443	12.75634	0.021384	0.453666	2178.672	0.149089
Blade[c]	1	8	215	250	1.708214	4.916425	15.14894	0.018855	0.580881	1675.762	0.154129
Tool Truck[b]	1	2	320	250	0.265118	0.752278	2.209625	0.003748	0.073699	333.0908	0.023921
Generator	1	2	100	120	0.201542	0.971305	1.426028	0.001829	0.107466	155.8989	0.018185
Compressor	1	2	40	50	0.16612	0.48917	0.426742	0.000576	0.040247	44.54252	0.014989
				Total	3.99334	12.03662	31.96767	0.046392	1.25596	4387.966	0.360313

a HP closest to the actual value provided by the applicant was used in the analysis
b Modeled as "off-highway truck"
c Modeled as a "scraper"

		Pounds per Day		
2012		**CO2**	**CH4**	**N2O[a]**
	Grubbing/Land Clearing	9609.372	0.862849	0.246151
	Grading/Excavation	15480.99	1.184158	0.396557
	Drainage/Utilities/Sub-Grade	0	0	0
	Paving	0	0	0
2013				
	Grubbing/Land Clearing	0	0	0
	Grading/Excavation	15480.98	1.126206	0.396557
	Drainage/Utilities/Sub-Grade	0	0	0
	Paving	0	0	0
2014				
	Grubbing/Land Clearing	0	0	0
	Grading/Excavation	15480.98	1.0676	0.396557
	Drainage/Utilities/Sub-Grade	5805.476	0.583884	0.148712
	Paving	4387.966	0.360313	0.112401

a Calcuated used CCAR ratio

		Metric Tons per year			
2012		**CO2**	**CH4**	**N2O[a]**	**CO2e**
	Grubbing/Land Clearing	95.89224	0.00861	0.002456	96.83452
	Grading/Excavation	154.4853	0.011817	0.003957	155.9602
	Drainage/Utilities/Sub-Grade	0	0	0	0
	Paving	0	0	0	0
	Total	***250.3775***	***0.020427***	***0.006414***	***252.7947***
2013					
	Grubbing/Land Clearing	0	0	0	0
	Grading/Excavation	1853.823	0.134861	0.047487	1871.376
	Drainage/Utilities/Sub-Grade	0	0	0	0
	Paving	0	0	0	0
	Total	***1853.823***	***0.134861***	***0.047487***	***1871.376***
2014					
	Grubbing/Land Clearing	0	0	0	0
	Grading/Excavation	154.4852	0.010654	0.003957	155.9357
	Drainage/Utilities/Sub-Grade	289.6652	0.029133	0.00742	292.5772
	Paving	131.363	0.010787	0.003365	132.6326
	Total	***575.5134***	***0.050573***	***0.014742***	***581.1455***

Diesel Fuel	**CO2**	**CH4**	**N2O**
kg CO2/gal diesel	10.15	0.00058	0.00026
g/gal		0.58	0.26
Ratio	1	5.71429E-05	2.56158E-05

Source: California Climate Action Registry 2009.

0.000453592	lbs/MT

Global Warming Potential	
CH4	N2O
21	310

Source: California Climate Action Registry 2009.

	Months/Year		
	2012	**2013**	**2014**
Grubbing	1		
Grading	1	12	1
Drainage			5
Paving			3
	Days of Activity/Year		
	2012	**2013**	**2014**
Grubbing	22		
Grading	22	264	22
Drainage			110
Paving			66

Assumes 22 working days per month

Data Needs for Air Quality Modeling (Road Construction Model)

It is assumed that the following phases of construction will occur:

1. Grubbing/land clearing
2. Grading/excavation
3. Drainage/utilities/sub-grade
4. Paving

These four phases correspond to these numbers

Question	Answer
What year will construction start?	2012

What pieces of equipment will be used for each of the 4 phases above (grubbing, grading, sub-grade, paving), what is the horsepower for each, and how many hours per day will they be used?

Please fill in the equipment pieces (i.e., grader, scraper, paver, etc.) that will be used for each numbered phases (indicated to the right by numbers 1-4), in addition to average horsepower for each equipment piece and hours per day the equipment will be used. An example has been filled in

Avg. Hp	Phase 1	Phase 2	Phase 3	Phase 4	Hours	Equipment
84	1	1			6	DOZER
400	1	2	1	1	8	WATER TRUCK
485	2				8	DUMP TRUCK
215	1	1	1	1	8	BLADE
450		2			8	EXCAVATOR
125	2		1		6	LOADER / BACKHOE
1500		1			4	DRILL RIG
275		1			4	CRANE
107		1			4	ROLLER
121			2		8	PAVING MACHINE
320		1	1	1	2	TOOL TRUCK
100		1	1	1	2	GENERATOR
40		1	1	1	2	COMPRESSOR
82	1	2	1		8	Compactor

Question	Answer
How many months will it take to construct each of the 4 phases above?	23 MONTHS
1. Grubbing/land clearing	1 MONTH
2. Grading/excavation	9 MONTHS + 5 MONTHS FOR STRUCTURES = 14 MO. TOTAL
3. Drainage/utilities/sub-grade	5 MONTHS
4. Paving	3 MONTHS

Question	Answer
How many water trucks will be required for the 4 phases above?	
1. Grubbing/land clearing	1
2. Grading/excavation	2
3. Drainage/utilities/sub-grade	1
4. Paving	1
How many total miles per day will the water trucks travel for each of the 4 phases?	
1. Grubbing/land clearing	1/2 MILE
2. Grading/excavation	5 MILES
3. Drainage/utilities/sub-grade	1/2 MILE
4. Paving	1 MILE
How many acres per day will be disturbed for the 4 phases above?	
1. Grubbing/land clearing	0.20 AC/DAY
2. Grading/excavation	0.50 AC/DAY FOR 9 MONTHS
3. Drainage/utilities/sub-grade	0.10 AC/DAY
4. Paving	0.10 AC/DAY
How many 1-way worker commute trips per day?	21
How many miles is the average 1-way worker commute trip to get to the work site?	20
How many workers will be required for construction of each of the 4 phases above?	
1. Grubbing/land clearing	3
2. Grading/excavation	10 * INCLUDES STRUCTURES
3. Drainage/utilities/sub-grade	3
4. Paving	5

Question	Answer
Which of the following is the predominant soil type?	
• Sand gravel	SILTY SANDS AND SANDS W/ VARYING AMOUNTS OF SOIL AND GRAVEL, GENERALLY MEDIUM DENSITY W/ OCCASSIONALLY VERY DENSE CONSISTENCY
• Weathered rock/earth	N/A
• Blasted rock	N/A
What is the project length in miles?	< 1.0 MILE
How many acres is the total project area?	14.6 ACRES
How many acres will be disturbed per day?	0.10 AC / DAY
How many cubic yards of soil will be *imported* per day?	410 CY/DAY
• How many miles is the round trip for soil hauling?	40
• How many soil hauling trips will be taken per day?	40 OVER 9 MONTHS
How many cubic yards of soil will be *exported* per day?	120 CY / DAY OVER 14 MO.
• How many miles is the round trip for soil hauling?	40
• How many soil hauling trips will be taken per day?	10

SCAB Fleet Average Emission Factors (Diesel)

2012

Air Basin	SC

Equipment	MaxHP	ROG (lb/hr)	CO (lb/hr)	NOX (lb/hr)	SOX (lb/hr)	PM (lb/hr)	CO2 (lb/hr)	CH4 (lb/hr)
Air Compressors	50	0.1010	0.2646	0.2310	0.0003	0.0239	22.3	0.0091
Bore/Drill Rigs	1000	0.4491	1.6773	6.6123	0.0093	0.1699	928	0.0405
Cranes	250	0.1103	0.3103	1.0712	0.0013	0.0388	112	0.0100
Excavators	500	0.1805	0.5493	1.6112	0.0023	0.0574	234	0.0163
Generator Sets	120	0.1206	0.4956	0.8099	0.0009	0.0640	77.9	0.0109
Off-Highway Trucks	250	0.1469	0.3944	1.3513	0.0019	0.0461	167	0.0133
	500	0.2263	0.6661	1.9463	0.0027	0.0705	272	0.0204
Pavers	120	0.1467	0.5107	0.8788	0.0008	0.0776	69.2	0.0132
Rollers	120	0.1054	0.4098	0.6619	0.0007	0.0574	59.0	0.0095
Rubber Tired Dozers	175	0.2209	0.8528	1.6304	0.0015	0.0945	129	0.0199
Scrapers	250	0.2367	0.6699	2.1849	0.0024	0.0859	209	0.0214
Tractors/Loaders/Backhoes	120	0.0760	0.3557	0.4910	0.0006	0.0432	51.7	0.0069

SCAB Fleet Average Emission Factors (Diesel)

2013

Air Basin	SC

		(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
Equipment	**MaxHP**	**ROG**	**CO**	**NOX**	**SOX**	**PM**	**CO2**	**CH4**
Air Compressors	50	0.0921	0.2546	0.2221	0.0003	0.0220	22.3	0.0083
Bore/Drill Rigs	1000	0.4163	1.6675	5.9553	0.0093	0.1544	928	0.0376
Cranes	250	0.1040	0.2948	0.9948	0.0013	0.0351	112	0.0094
Excavators	500	0.1735	0.5271	1.4763	0.0023	0.0516	234	0.0157
Generator Sets	120	0.1106	0.4905	0.7587	0.0009	0.0590	77.9	0.0100
Off-Highway Trucks	250	0.1400	0.3837	1.2373	0.0019	0.0412	167	0.0126
	500	0.2170	0.6362	1.7865	0.0027	0.0634	272	0.0196
Pavers	120	0.1387	0.5057	0.8357	0.0008	0.0729	69.2	0.0125
Rollers	120	0.0986	0.4063	0.6253	0.0007	0.0534	59.0	0.0089
Rubber Tired Dozers	175	0.2119	0.8457	1.5561	0.0015	0.0893	129	0.0191
Scrapers	250	0.2252	0.6408	2.0481	0.0024	0.0791	209	0.0203
Tractors/Loaders/Backhoes	120	0.0694	0.3529	0.4565	0.0006	0.0383	51.7	0.0063

SCAB Fleet Average Emission Factors (Diesel)

2014

Air Basin	SC

Equipment	MaxHP	ROG (lb/hr)	CO (lb/hr)	NOX (lb/hr)	SOX (lb/hr)	PM (lb/hr)	CO2 (lb/hr)	CH4 (lb/hr)
Air Compressors	50	0.0831	0.2446	0.2134	0.0003	0.0201	22.3	0.0075
Bore/Drill Rigs	1000	0.3889	1.6591	5.4092	0.0093	0.1411	928	0.0351
Cranes	250	0.0979	0.2817	0.9088	0.0013	0.0317	112	0.0088
Excavators	500	0.1657	0.5102	1.3127	0.0023	0.0463	234	0.0149
Generator Sets	120	0.1008	0.4857	0.7130	0.0009	0.0537	77.9	0.0091
Off-Highway Trucks	250	0.1326	0.3761	1.1048	0.0019	0.0368	167	0.0120
	500	0.2065	0.6134	1.5945	0.0027	0.0567	272	0.0186
Pavers	120	0.1311	0.5011	0.7948	0.0008	0.0682	69.2	0.0118
Rollers	120	0.0921	0.4030	0.5906	0.0007	0.0494	59.0	0.0083
Rubber Tired Dozers	175	0.2034	0.8392	1.4854	0.0015	0.0841	129	0.0183
Scrapers	250	0.2135	0.6146	1.8936	0.0024	0.0726	209	0.0193
Tractors/Loaders/Backhoe	120	0.0634	0.3503	0.4252	0.0006	0.0337	51.7	0.0057

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Passenger Vehicles & Delivery Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)
Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:
Passenger Vehicles (<8500 pounds) & Delivery Trucks (>8500 pounds)

The following emission factors were compiled by running the California Air Resources Board's EMFAC2007 (version 2.3) Burden Model, taking the weighted average of vehicle types and simplifying into two categories:
Passenger Vehicles & Delivery Trucks.

These emission factors can be used to calculate on-road mobile source emissions for the vehicle categories listed in the tables below, by use of the following equation:
Emissions (pounds per day) = N x TL x EF
where N = number of trips, TL = trip length (miles/day), and EF = emission factor (pounds per mile)

This methodology replaces the old EMFAC emission factors in Tables A-9-5-J-1 through A-9-5-L in Appendix A9 of the current SCAQMD CEQA Handbook. All the emission factors account for the emissions from start, running and idling exhaust. In addition, the ROG emission factors include diurnal, hot soak, running and resting emissions, and the PM10 & PM2.5 emission factors include tire and brake wear.

Scenario Year: **2007**
All model years in the range 1965 to 2007

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.01155158	CO	0.02407553
NOx	0.00121328	NOx	0.02508445
ROG	0.00118234	ROG	0.00323145
SOx	0.00001078	SOx	0.00002626
PM10	0.00008447	PM10	0.00091020
PM2.5	0.00005243	PM2.5	0.00078884
CO2	1.10672236	CO2	2.72245619
CH4	0.00010306	CH4	0.00016030

Scenario Year: **2008**
All model years in the range 1965 to 2008

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.01054844	CO	0.02194915
NOx	0.00110288	NOx	0.02371258
ROG	0.00107919	ROG	0.00299270
SOx	0.00001075	SOx	0.00002565
PM10	0.00008505	PM10	0.00085607
PM2.5	0.00005293	PM2.5	0.00073933
CO2	1.09953226	CO2	2.71943400
CH4	0.00009465	CH4	0.00014769

Scenario Year: **2009**
All model years in the range 1965 to 2009

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.00968562	CO	0.02016075
NOx	0.00100518	NOx	0.02236636
ROG	0.00099245	ROG	0.00278899
SOx	0.00001066	SOx	0.00002679
PM10	0.00008601	PM10	0.00080550
PM2.5	0.00005384	PM2.5	0.00069228
CO2	1.09755398	CO2	2.72330496
CH4	0.00008767	CH4	0.00013655

Scenario Year: **2010**
All model years in the range 1966 to 2010

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.00826276	CO	0.01843765
NOx	0.00091814	NOx	0.02062460
ROG	0.00091399	ROG	0.00258958
SOx	0.00001077	SOx	0.00002701
PM10	0.00008698	PM10	0.00075121
PM2.5	0.00005478	PM2.5	0.00064233
CO2	1.09568235	CO2	2.73222199
CH4	0.00008146	CH4	0.00012576

AQMD

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Passenger Vehicles & Delivery Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Passenger Vehicles (<8500 pounds) & Delivery Trucks (>8500 pounds)

Scenario Year: **2011**

All model years in the range 1967 to 2011

	Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)
CO	0.00826276	CO	0.01693242
NOx	0.00084460	NOx	0.01893366
ROG	0.00085233	ROG	0.00241868
SOx	0.00001077	SOx	0.00002728
PM10	0.00008879	PM10	0.00070097
PM2.5	0.00005653	PM2.5	0.00059682
CO2	1.10235154	CO2	2.75180822
CH4	0.00007678	CH4	0.00011655

Scenario Year: **2012**

All model years in the range 1968 to 2012

	Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)
CO	0.00765475	CO	0.01545741
NOx	0.00077583	NOx	0.01732423
ROG	0.00079628	ROG	0.00223776
SOx	0.00001073	SOx	0.00002667
PM10	0.00008979	PM10	0.00064975
PM2.5	0.00005750	PM2.5	0.00054954
CO2	1.10152540	CO2	2.76628414
CH4	0.00007169	CH4	0.00010668

Scenario Year: **2013**

All model years in the range 1969 to 2013

	Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)
CO	0.00709228	CO	0.01407778
NOx	0.00071158	NOx	0.01577311
ROG	0.00074567	ROG	0.00206295
SOx	0.00001072	SOx	0.00002682
PM10	0.00009067	PM10	0.00059956
PM2.5	0.00005834	PM2.5	0.00050174
CO2	1.10087435	CO2	2.78163459
CH4	0.00006707	CH4	0.00009703

Scenario Year: **2014**

All model years in the range 1970 to 2014

	Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)
CO	0.00660353	CO	0.01284321
NOx	0.00065484	NOx	0.01425162
ROG	0.00070227	ROG	0.00189649
SOx	0.00001069	SOx	0.00002754
PM10	0.00009185	PM10	0.00054929
PM2.5	0.00005939	PM2.5	0.00045519
CO2	1.10257205	CO2	2.79845465
CH4	0.00006312	CH4	0.00008798

Scenario Year: **2015**

All model years in the range 1971 to 2015

	Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)
CO	0.00614108	CO	0.01169445
NOx	0.00060188	NOx	0.01285026
ROG	0.00066355	ROG	0.00173890
SOx	0.00001070	SOx	0.00002741
PM10	0.00009259	PM10	0.00050307
PM2.5	0.00006015	PM2.5	0.00041268
CO2	1.10192837	CO2	2.81247685
CH4	0.00005923	CH4	0.00008076

Scenario Year: **2016**

All model years in the range 1972 to 2016

	Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)
CO	0.00575800	CO	0.01080542
NOx	0.00055658	NOx	0.01172881
ROG	0.00063254	ROG	0.00161521
SOx	0.00001071	SOx	0.00002767
PM10	0.00009392	PM10	0.00046606
PM2.5	0.00006131	PM2.5	0.00037868
CO2	1.10677664	CO2	2.83134285
CH4	0.00005623	CH4	0.00007355

AQMD

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Passenger Vehicles & Delivery Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Passenger Vehicles (<8500 pounds) & Delivery Trucks (>8500 pounds)

Scenario Year: **2017**

All model years in the range 1973 to 2017

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.00537891**	CO	**0.00998101**
NOx	**0.00051297**	NOx	**0.01070034**
ROG	**0.00060109**	ROG	**0.00150242**
SOx	**0.00001079**	SOx	**0.00002723**
PM10	**0.00009446**	PM10	**0.00043131**
PM2.5	**0.00006192**	PM2.5	**0.00034605**
CO2	**1.10627489**	CO2	**2.84005015**
CH4	**0.00005300**	CH4	**0.00006663**

Scenario Year: **2018**

All model years in the range 1974 to 2018

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.00502881**	CO	**0.00923234**
NOx	**0.00047300**	NOx	**0.00979416**
ROG	**0.00057178**	ROG	**0.00139856**
SOx	**0.00001071**	SOx	**0.00002749**
PM10	**0.00009494**	PM10	**0.00040110**
PM2.5	**0.00006234**	PM2.5	**0.00031792**
CO2	**1.10562643**	CO2	**2.84646835**
CH4	**0.00005003**	CH4	**0.00006203**

Scenario Year: **2019**

All model years in the range 1975 to 2019

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.00471820**	CO	**0.00857192**
NOx	**0.00043716**	NOx	**0.00900205**
ROG	**0.00054654**	ROG	**0.00130563**
SOx	**0.00001072**	SOx	**0.00002706**
PM10	**0.00009523**	PM10	**0.00037393**
PM2.5	**0.00006259**	PM2.5	**0.00029276**
CO2	**1.10496100**	CO2	**2.85060182**
CH4	**0.00004743**	CH4	**0.00005619**

Scenario Year: **2020**

All model years in the range 1976 to 2020

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.00444247**	CO	**0.00799617**
NOx	**0.00040506**	NOx	**0.00831802**
ROG	**0.00052463**	ROG	**0.00122382**
SOx	**0.00001073**	SOx	**0.00002733**
PM10	**0.00009550**	PM10	**0.00035054**
PM2.5	**0.00006279**	PM2.5	**0.00027128**
CO2	**1.10456157**	CO2	**2.85148109**
CH4	**0.00004495**	CH4	**0.00005330**

Scenario Year: **2021**

All model years in the range 1977 to 2021

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.00421218**	CO	**0.00748303**
NOx	**0.00037757**	NOx	**0.00773500**
ROG	**0.00050573**	ROG	**0.00115568**
SOx	**0.00001073**	SOx	**0.00002755**
PM10	**0.00009640**	PM10	**0.00033125**
PM2.5	**0.00006364**	PM2.5	**0.00025331**
CO2	**1.11009559**	CO2	**2.86434187**
CH4	**0.00004322**	CH4	**0.00004905**

Scenario Year: **2022**

All model years in the range 1978 to 2022

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	**0.00397866**	CO	**0.00699290**
NOx	**0.00035150**	NOx	**0.00722470**
ROG	**0.00048658**	ROG	**0.00108569**
SOx	**0.00001072**	SOx	**0.00002774**
PM10	**0.00009661**	PM10	**0.00031501**
PM2.5	**0.00006389**	PM2.5	**0.00023906**
CO2	**1.11019931**	CO2	**2.87006769**
CH4	**0.00004121**	CH4	**0.00004557**

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Passenger Vehicles & Delivery Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Passenger Vehicles (<8500 pounds) & Delivery Trucks (>8500 pounds)

Scenario Year: **2023**

All model years in the range 1979 to 2023

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.00377527	CO	0.00658123
NOx	0.00032851	NOx	0.00679147
ROG	0.00046900	ROG	0.00102852
SOx	0.00001070	SOx	0.00002790
PM10	0.00009676	PM10	0.00030109
PM2.5	0.00006405	PM2.5	0.00022582
CO2	1.11023373	CO2	2.87466338
CH4	0.00003951	CH4	0.00004218

Scenario Year: **2024**

All model years in the range 1980 to 2024

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.00358611	CO	0.00625076
NOx	0.00030721	NOx	0.00647083
ROG	0.00045136	ROG	0.00096578
SOx	0.00001080	SOx	0.00002807
PM10	0.00009676	PM10	0.00029407
PM2.5	0.00006410	PM2.5	0.00021880
CO2	1.11061572	CO2	2.88010717
CH4	0.00003781	CH4	0.00004019

Scenario Year: **2025**

All model years in the range 1981 to 2025

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.00342738	CO	0.00595363
NOx	0.00028846	NOx	0.00615945
ROG	0.00043545	ROG	0.00092178
SOx	0.00001070	SOx	0.00002761
PM10	0.00009679	PM10	0.00028425
PM2.5	0.00006418	PM2.5	0.00020958
CO2	1.11078571	CO2	2.88143570
CH4	0.00003641	CH4	0.00003765

Scenario Year: **2026**

All model years in the range 1982 to 2026

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.00328779	CO	0.00569435
NOx	0.00027141	NOx	0.00589869
ROG	0.00042052	ROG	0.00088403
SOx	0.00001076	SOx	0.00002716
PM10	0.00009687	PM10	0.00027657
PM2.5	0.00006415	PM2.5	0.00020187
CO2	1.11105829	CO2	2.88298299
CH4	0.00003518	CH4	0.00003581

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Heavy-Heavy-Duty Diesel Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Heavy-Heavy-Duty Diesel Trucks (33,001 to 60,000 pounds)

The following emission factors were compiled by running the California Air Resources Board's EMFAC2007 (version 2.3) Burden Model and extracting the **Heavy-Heavy-Duty Diesel Truck (HHDT)** Emission Factors.

These emission factors can be used to calculate on-road mobile source emissions for the vehicle/emission categories listed in the tables below, by use of the following equation:

Emissions (pounds per day) = N x TL x EF

where N = number of trips, TL = trip length (miles/day), and EF = emission factor (pounds per mile)

The **HHDT-DSL** vehicle/emission category accounts for all emissions from heavy-heavy-duty diesel trucks, including start, running and idling exhaust. In addition, ROG emission factors account for diurnal, hot soak, running and resting emissions, and the PM10 & PM2.5 emission factors account for tire and brake wear.

The **HHDT-DSL, Exh** vehicle/emission category includes only the exhaust portion of PM10 & PM2.5 emissions from heavy-heavy-duty diesel trucks.

Scenario Year: **2007**

All model years in the range 1965 to 2007

HHDT-DSL (pounds/mile)	
CO	**0.01446237**
NOx	**0.04718166**
ROG	**0.00372949**
SOx	**0.00003962**
PM10	**0.00230900**
PM2.5	**0.00204018**
CO2	**4.22184493**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00216752**
PM2.5	**0.00199491**

Scenario Year: **2008**

All model years in the range 1965 to 2008

HHDT-DSL (pounds/mile)	
CO	**0.01361368**
NOx	**0.04458017**
ROG	**0.00351579**
SOx	**0.00004136**
PM10	**0.00215635**
PM2.5	**0.00189990**
CO2	**4.21067145**
CH4	**0.00016269**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00201296**
PM2.5	**0.00185303**

Scenario Year: **2009**

All model years in the range 1965 to 2009

HHDT-DSL (pounds/mile)	
CO	**0.01282236**
NOx	**0.04184591**
ROG	**0.00329320**
SOx	**0.00004013**
PM10	**0.00199572**
PM2.5	**0.00175227**
CO2	**4.21080792**
CH4	**0.00015249**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00185393**
PM2.5	**0.00170680**

Scenario Year: **2010**

All model years in the range 1966 to 2010

HHDT-DSL (pounds/mile)	
CO	**0.01195456**
NOx	**0.03822102**
ROG	**0.00304157**
SOx	**0.00004131**
PM10	**0.00183062**
PM2.5	**0.00160083**
CO2	**4.21120578**
CH4	**0.00014201**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00168861**
PM2.5	**0.00155435**

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Heavy-Heavy-Duty Diesel Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Heavy-Heavy-Duty Diesel Trucks (33,001 to 60,000 pounds)

Scenario Year: **2011**

All model years in the range 1967 to 2011

HHDT-DSL (pounds/mile)	
CO	**0.01112463**
NOx	**0.03455809**
ROG	**0.00279543**
SOx	**0.00003972**
PM10	**0.00166087**
PM2.5	**0.00144489**
CO2	**4.22045680**
CH4	**0.00012910**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00151936**
PM2.5	**0.00139772**

Scenario Year: **2012**

All model years in the range 1968 to 2012

HHDT-DSL (pounds/mile)	
CO	**0.01021519**
NOx	**0.03092379**
ROG	**0.00252764**
SOx	**0.00004042**
PM10	**0.00149566**
PM2.5	**0.00129354**
CO2	**4.21590774**
CH4	**0.00011651**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00135537**
PM2.5	**0.00124837**

Scenario Year: **2013**

All model years in the range 1969 to 2013

HHDT-DSL (pounds/mile)	
CO	**0.00931790**
NOx	**0.02742935**
ROG	**0.00226308**
SOx	**0.00004086**
PM10	**0.00133697**
PM2.5	**0.00114629**
CO2	**4.21518556**
CH4	**0.00010441**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00119623**
PM2.5	**0.00109863**

Scenario Year: **2014**

All model years in the range 1970 to 2014

HHDT-DSL (pounds/mile)	
CO	**0.00846435**
NOx	**0.02418049**
ROG	**0.00201594**
SOx	**0.00004092**
PM10	**0.00118458**
PM2.5	**0.00100582**
CO2	**4.21279345**
CH4	**0.00009261**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00104243**
PM2.5	**0.00096059**

Scenario Year: **2015**

All model years in the range 1971 to 2015

HHDT-DSL (pounds/mile)	
CO	**0.00766891**
NOx	**0.02122678**
ROG	**0.00178608**
SOx	**0.00004082**
PM10	**0.00104715**
PM2.5	**0.00087977**
CO2	**4.20902225**
CH4	**0.00008369**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00090631**
PM2.5	**0.00083282**

Scenario Year: **2016**

All model years in the range 1972 to 2016

HHDT-DSL (pounds/mile)	
CO	**0.00704604**
NOx	**0.01887374**
ROG	**0.00161035**
SOx	**0.00003952**
PM10	**0.00094448**
PM2.5	**0.00078443**
CO2	**4.21063031**
CH4	**0.00007508**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00080419**
PM2.5	**0.00073898**

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Heavy-Heavy-Duty Diesel Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Heavy-Heavy-Duty Diesel Trucks (33,001 to 60,000 pounds)

Scenario Year: **2017**

All model years in the range 1973 to 2017

HHDT-DSL (pounds/mile)	
CO	0.00650533
NOx	0.01690387
ROG	0.00145203
SOx	0.00004033
PM10	0.00084894
PM2.5	0.00069721
CO2	4.20820129
CH4	0.00006722

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00070873
PM2.5	0.00065111

Scenario Year: **2018**

All model years in the range 1974 to 2018

HHDT-DSL (pounds/mile)	
CO	0.00604721
NOx	0.01526414
ROG	0.00131697
SOx	0.00003934
PM10	0.00076808
PM2.5	0.00062383
CO2	4.20756838
CH4	0.00006182

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00062758
PM2.5	0.00057700

Scenario Year: **2019**

All model years in the range 1975 to 2019

HHDT-DSL (pounds/mile)	
CO	0.00565433
NOx	0.01389113
ROG	0.00120235
SOx	0.00004032
PM10	0.00070198
PM2.5	0.00056085
CO2	4.20637830
CH4	0.00005499

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00056085
PM2.5	0.00051320

Scenario Year: **2020**

All model years in the range 1976 to 2020

HHDT-DSL (pounds/mile)	
CO	0.00532242
NOx	0.01274755
ROG	0.00110621
SOx	0.00003957
PM10	0.00064574
PM2.5	0.00050904
CO2	4.20541416
CH4	0.00005216

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00050364
PM2.5	0.00046227

Scenario Year: **2021**

All model years in the range 1977 to 2021

HHDT-DSL (pounds/mile)	
CO	0.00503726
NOx	0.01179977
ROG	0.00103095
SOx	0.00004033
PM10	0.00059437
PM2.5	0.00046287
CO2	4.21495573
CH4	0.00004734

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00045411
PM2.5	0.00041729

Scenario Year: **2022**

All model years in the range 1978 to 2022

HHDT-DSL (pounds/mile)	
CO	0.00478830
NOx	0.01098794
ROG	0.00096142
SOx	0.00004106
PM10	0.00055427
PM2.5	0.00042597
CO2	4.21520828
CH4	0.00004448

HHDT-DSL, Exh (pounds/mile)	
PM10	0.00041399
PM2.5	0.00037807

Highest (Most Conservative) EMFAC2007 (version 2.3)
Emission Factors for On-Road Heavy-Heavy-Duty Diesel Trucks

Projects in the SCAQMD (Scenario Years 2007 - 2026)

Derived from Peak Emissions Inventory (**Winter**, **Annual**, **Summer**)

Vehicle Class:

Heavy-Heavy-Duty Diesel Trucks (33,001 to 60,000 pounds)

Scenario Year: **2023**

All model years in the range 1979 to 2023

HHDT-DSL (pounds/mile)	
CO	**0.00457902**
NOx	**0.01031407**
ROG	**0.00090210**
SOx	**0.00004009**
PM10	**0.00052122**
PM2.5	**0.00039592**
CO2	**4.21483461**
CH4	**0.00004176**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00037922**
PM2.5	**0.00034915**

Scenario Year: **2024**

All model years in the range 1980 to 2024

HHDT-DSL (pounds/mile)	
CO	**0.00444444**
NOx	**0.00974372**
ROG	**0.00084009**
SOx	**0.00003930**
PM10	**0.00050766**
PM2.5	**0.00038320**
CO2	**4.19552935**
CH4	**0.00003930**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00036682**
PM2.5	**0.00033735**

Scenario Year: **2025**

All model years in the range 1981 to 2025

HHDT-DSL (pounds/mile)	
CO	**0.00431086**
NOx	**0.00932573**
ROG	**0.00080206**
SOx	**0.00004018**
PM10	**0.00048541**
PM2.5	**0.00036326**
CO2	**4.19512979**
CH4	**0.00003697**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00034397**
PM2.5	**0.00031664**

Scenario Year: **2026**

All model years in the range 1982 to 2026

HHDT-DSL (pounds/mile)	
CO	**0.00420297**
NOx	**0.00898990**
ROG	**0.00077178**
SOx	**0.00003946**
PM10	**0.00046717**
PM2.5	**0.00034564**
CO2	**4.19349747**
CH4	**0.00003630**

HHDT-DSL, Exh (pounds/mile)	
PM10	**0.00032670**
PM2.5	**0.00029830**